

Service Manual

General Description

Adjustment Procedures

Block / Schematic Diagrams

Exploded Views / Parts List

Video Cassette Recorder

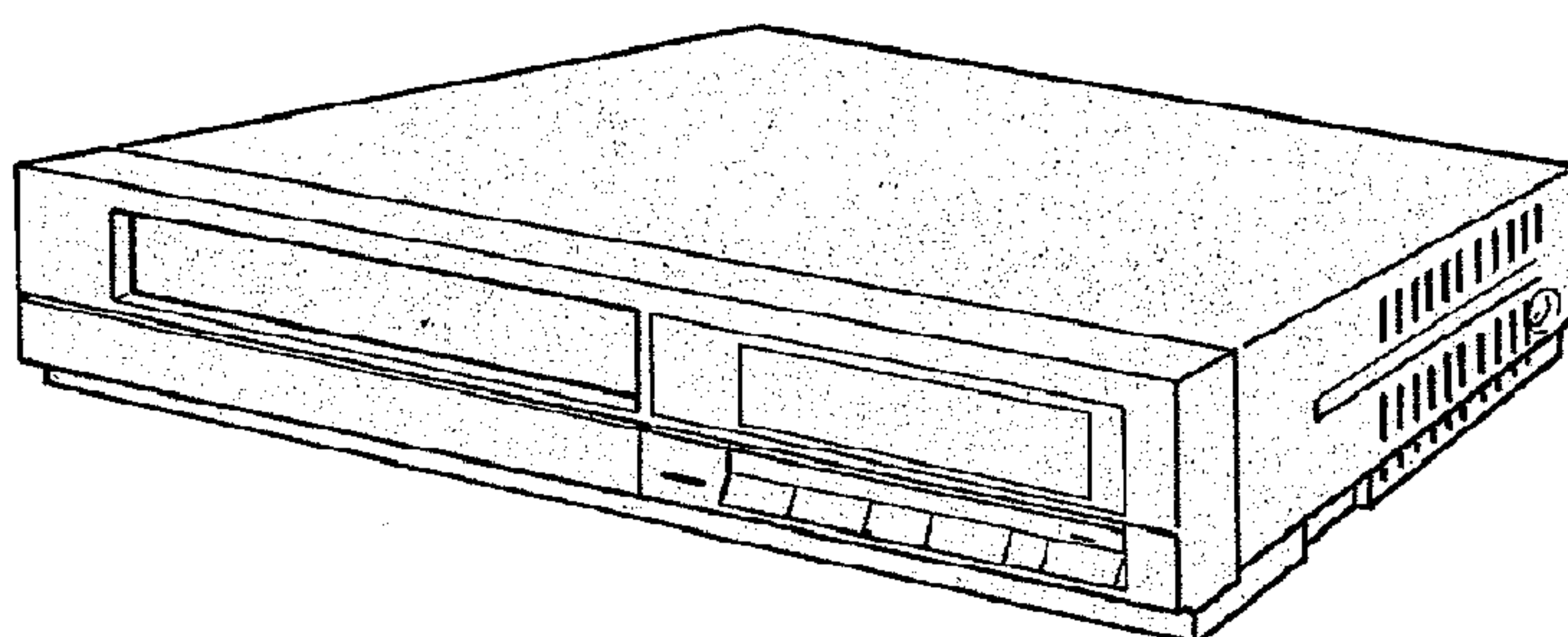


National VHS HQ

PAL

NV-J1^{EN}_{MC}

NV-J101EM



SPECIFICATIONS

ITEM	SPECIFICATION		ITEM	SPECIFICATION	
POWER	SOURCE: 110~240 V AC 50/60Hz		VIDEO	INPUT: VIDEO IN CONNECTOR (Phono type) 1.0 V _{p-p} , 75Ω terminated	
	CONSUMPTION: 23 watts			OUTPUT: VIDEO OUT CONNECTOR (Phono type) 1.0 V _{p-p} , 75Ω terminated	
RECORDING SYSTEM	2 rotary heads, helical scanning system		AUDIO		HEAD: 1 Stationary head
	PAL			INPUT: AUDIO IN CONNECTOR (Phono type) More than -10dBV (316mV), 50kΩ	
TV TUNER SYSTEM	NV-J1EN	VHF I: CH2~CH4 (PAL B) VHF III: CH5~CH12 (PAL B) UHF: CH21~CH69 (PAL G) 75Ω unbalanced	TAPE FORMAT	OUTPUT: AUDIO OUT CONNECTOR (Phono type) -6dBV (500mV), less than 1kΩ	
	NV-J101EM	VHF I: CHE2~CHE4 (PAL B) VHF III: CHE5~CHE12 (PAL B) UHF: CHE21~CHE69 (PAL G) 75Ω unbalanced			VHS Cassette tape (Tape width 12.7 mm)
	NV-J1MC	VHF I: CHC1~CHC5 (PAL D) VHF III: CHC6~CHC12 (PAL D) UHF: CHC13~CHC57 (PAL D) CHC21~CHC69 (PAL I) 75Ω unbalanced			
RF OUT SYSTEM	NV-J1EN	VHF: CH3/4, 76±3dBμ (PAL B) 75Ω terminated	TAPE SPEED	380(W)×89(H)×344.5(D)mm	
	NV-J101EM	UHF: CHE36±4, 73±3dBμ (PAL G) 75Ω terminated	DIMENSIONS		
	NV-J1MC	UHF: CHC25 ⁺² ₋₁ (PAL D), CHE38 ⁺² ₋₂ (PAL I), 73±3dBμ, 75Ω terminated	WEIGHT		4.9kg
VIDEO	HEADS: 3 rotary heads 1 pair for recording and play back (L-R heads) 1 pc. of head for video trick play with L' head (field still and field slow)		STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Infra-red remote controller 1 pc. AC Mains Lead 1 pc. Separational Adaptor (NV-J1EN/MC) 1 pc. AC Plug Adaptor (NV-J101EM/NV-J1MC) 1 pc. Matching Adaptor (NV-J1MC)	

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

National

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INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.

Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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REMARKS (NV-J101EM/NV-J1MC):

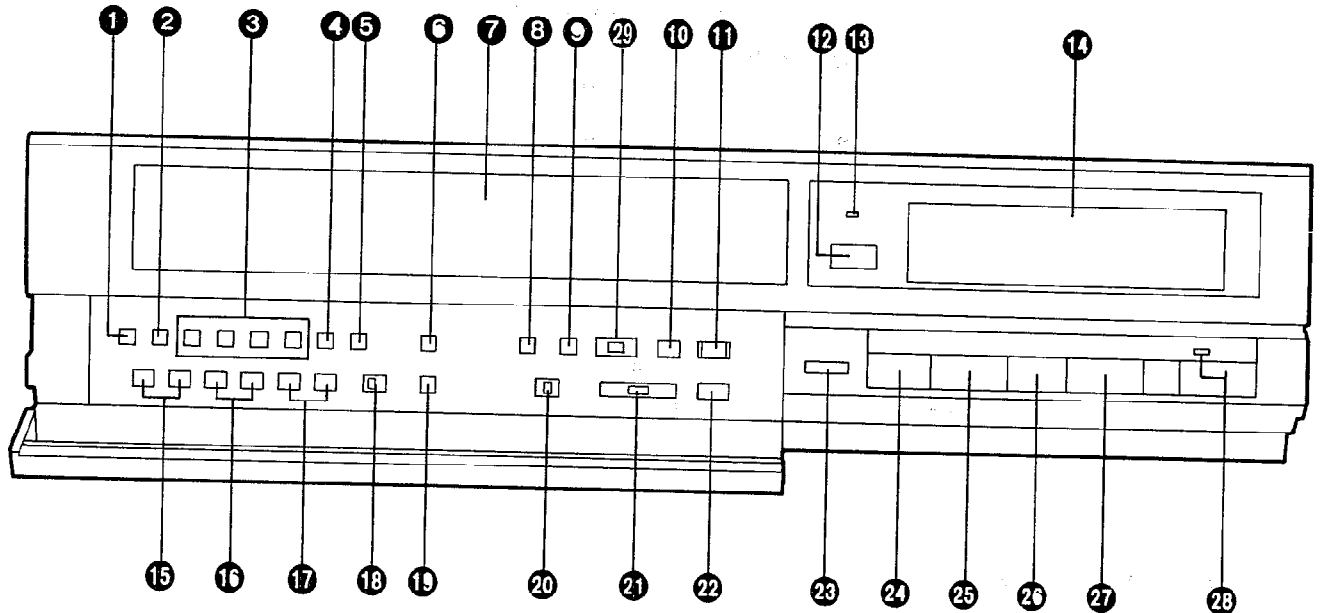
When receiving a SECAM broadcast, this VTR will record the programme in the MESECAM system.
If a video cassette recorded in the SECAM system on SECAM VHS recorder is played back in the MESECAM system or if a video recorded on this VTR in the MESECAM system is played back on another VTR in SECAM system, the playback picture will be black and white.

SECTION 1

GENERAL DESCRIPTIONS

1-1. CONTROLS AND COMPONENTS

FRONT



1 Clock Button

- In case of a power failure, the timer back-up system maintains the clock operation and timer content for at least 60 seconds. However, depending on the charging time and the memory content, the back-up time may be considerably longer. However, it takes more than 60 minutes for the back-up circuit to become operational, after the VTR is connected to the mains.

2 Preset/Fine/Normal Button

3 Timer Controls

- The clock/timer of the VTR is programmed with the calendar up to the end of the year 2087.
The indications 88-99 are for the years 1988–1999.
The indications 00-87 are for the years 2000–2087.

4 Band/AFC Button

5 Clear Button

6 Timer Record Button

7 Cassette Compartment

8 Memory/Repeat/Search Button

Repeatedly pressing this button will change the indication in the following order: "M" (Memory)→"R" (Repeat)→"S" (Search)→both indications are off→"M"...

9 Reset Button

10 Pause/Still Button (II)

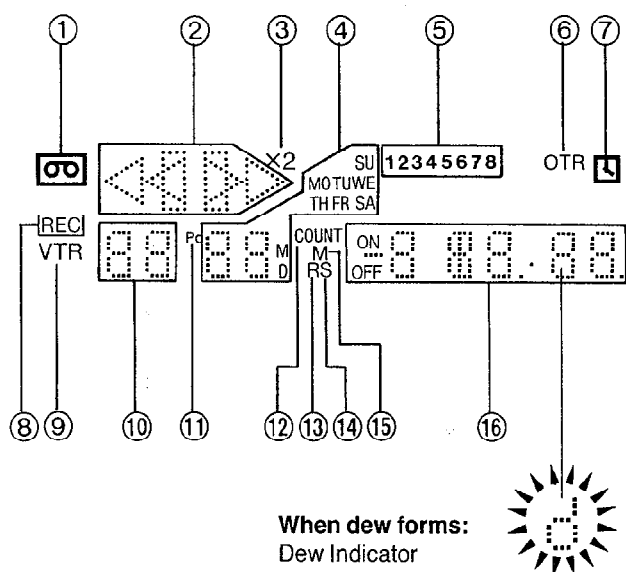
11 Record Button (●)

12 Infra-red Remote Control Receiver

13 Digital Tracking Indicator

14 Multi-Function Display

Multi-Function Display



- ① Cassette-in Indicator
- ② Tape Running Display
- ③ Double Speed Indicator
- ④ Date Display
- ⑤ Timer Programme Number
- ⑥ OTR Indicator
- ⑦ Timer Recording Indicator
- ⑧ Recording Indicator
- ⑨ VTR Mode Indicator (NV-J1EN)
- ⑩ Channel Display
- ⑪ Position Indicator
- ⑫ Counter Mode Indicator
- ⑬ Repeat Indicator
- ⑭ Search Indicator
- ⑮ Memory Indicator
- ⑯ Clock/Counter Display

15 Channel Selection Up and Down Buttons

16 OTR On Buttons

17 OTR Off Buttons

18 Digital Tracking Selector

Digital Tracking

ON: Select this position for digital tracking.

When playback is started after inserting a cassette, and the VTR is turned on, the Digital Tracking function will be activated automatically, the Digital Tracking Indicator will flash for several seconds, and the tracking will be adjusted automatically (after the adjustment, the Digital Tracking Indicator will remain lit).

- During playback, the Digital Tracking function will be activated whenever the playback changes over from an unrecorded part to a recorded part, provided the recorded part is longer than 4 seconds.

Manual Tracking

OFF: Select this position for manual tracking.

- When the playback picture is distorted by noise bars, adjust by pressing the Tracking "+" or "-" Button.
- To return the Tracking Control to the former setting, press the Tracking "+" and "-" Buttons simultaneously.

19 Clock/Counter Selector

20 Noise Filter Switch

ON: For playback of tapes with inferior picture quality caused, for example, by repeated dubbing.

OFF: For ordinary use of the VTR.

21 Picture Sharpness Control

22 VTR/TV Selector (NV-J1EN)

23 Eject Button (▲)

24 Rewind ◀◀/Review ▶▶ Button

25 Play/×2 Button (▶)

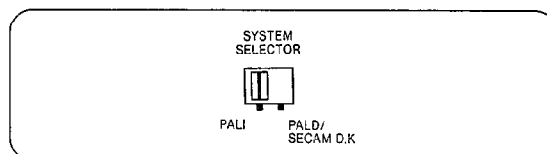
26 Fast Forward ▶▶/Cue ◀▶ Button

27 Stop Button (■)

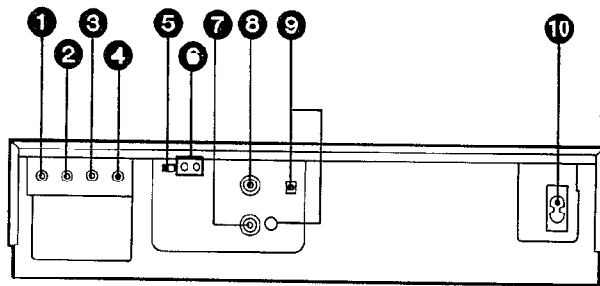
28 VTR On/Off Switch with Indicator

29 TV System Selector (NV-J1MC)

Select the TV system of the TV station which is desired to be tuned.

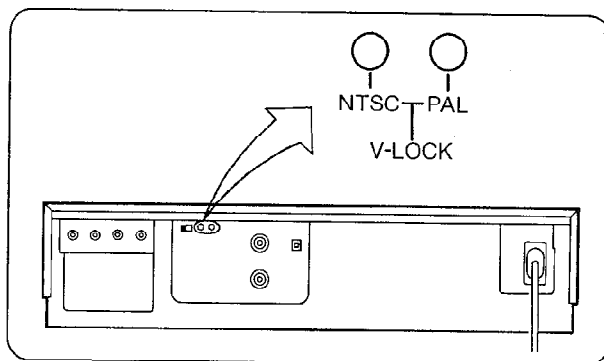


REAR



- ➊ Audio Input Socket
- ➋ Video Input Socket
- ➌ Audio Output Socket
- ➍ Video Output Socket
- ➎ Test Signal Switch
- ➏ Vertical Lock Controls

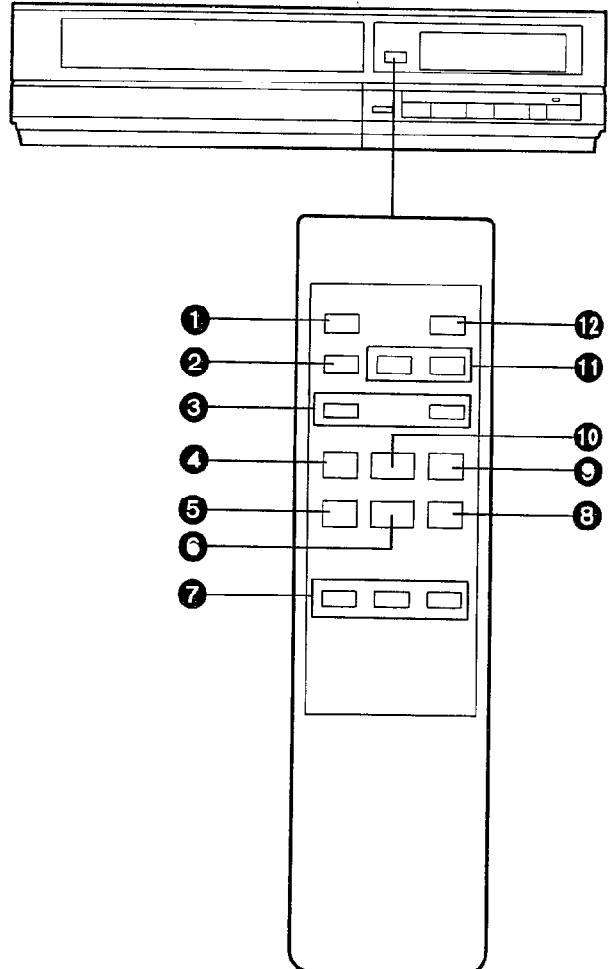
If vertical jitter occurs during Still playback, adjust the V-Lock Control (on the rear of the VTR) for the corresponding recording system (NTSC or PAL) with the screw driver. A one-time adjustment should be all that is necessary.



- ➐ RF Input Socket
- ➑ RF Output Socket
- ➒ RF Converter Channel Selector (NV-J1EN)
Video Playback Channel Selector (NV-J1MC/NV-J101EM)
- ➓ AC Mains Lead Socket

1-2. INFRA-RED REMOTE CONTROLLER

Parts No.: VEQ1044 (NV-J1EN)
VEQ1086 (NV-J1MC/NV-J101EM)



- ➊ VTR On/Off Switch
- ➋ Clock/Counter Selector
- ➌ Record Buttons (●)
- ➍ Pause/Still Button (||)
- ➎ Rewind <</Review >> Button
- ➏ Play/×2 Button (▶)
- ➐ Slow Buttons
- ➑ Fast Forward >>>/Cue >> Button
- ➒ Still Advance Button (||▶)
- ➓ Stop Button (■)
- ➔ Channel Selection Up and Down Buttons
- ➕ VTR/TV Selector (NV-J1EN)

1-3 POWER SOURCE FOR THE REMOTE CONTROLLER

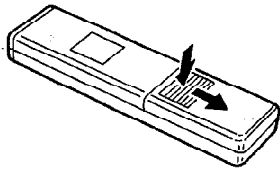
- The Remote Controller is powered by 2IEC "R6" size batteries. The life of the batteries is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the batteries once a year.

CAUTION FOR BATTERY REPLACEMENT

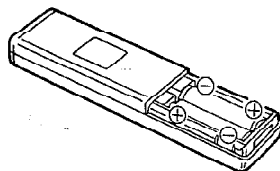
- Load the new batteries with their polarities (⊕ and ⊖) aligned correctly.
- Do not apply heat to batteries, or internal short-circuit may occur.
- If you do not intend to use the Remote Controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new batteries together. (Also never use an alkaline battery with a manganese battery.)

Load the batteries as follows:

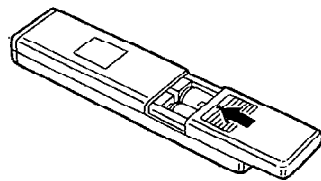
- 1 Remove the battery compartment lid.



- 2 Place the batteries in the battery compartment as indicated inside the battery compartment.



- 3 Replace the lid.



Note:

- The infra-red beam should be transmitted directly at the Infra-red Remote Control Receiver on the front of the VTR.
- Direct sunlight may interfere with the beam.
- The light sensing angle of the Infra-red Remote Control Receiver in the VTR is about 30° for each side from the centre.
- The unit should be used within a range of about 7 meters from the front of the VTR.

1-4. NTSC PLAYBACK

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.



- Depending on the TV set used, the picture may shrink vertically and black bars may appear both at the top and bottom of the screen. This is not an indication of a malfunction.
- And the playback picture may roll up or down, if the TV set is equipped with a V-HOLD control, it may be possible to stop the picture movement by adjusting this control.
- The special playback functions (except normal playback) cannot be used for NTSC recordings. This is not an indication of a malfunction.
- Recording in the NTSC system is not possible with this VTR.

SECTION 2 ADJUSTMENT PROCEDURES

2-1 DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flowchart indicates disassembly steps of the cabinet parts and circuit boards in order to find the necessary items for servicing. When reassembling, perform the steps in the reverse order.

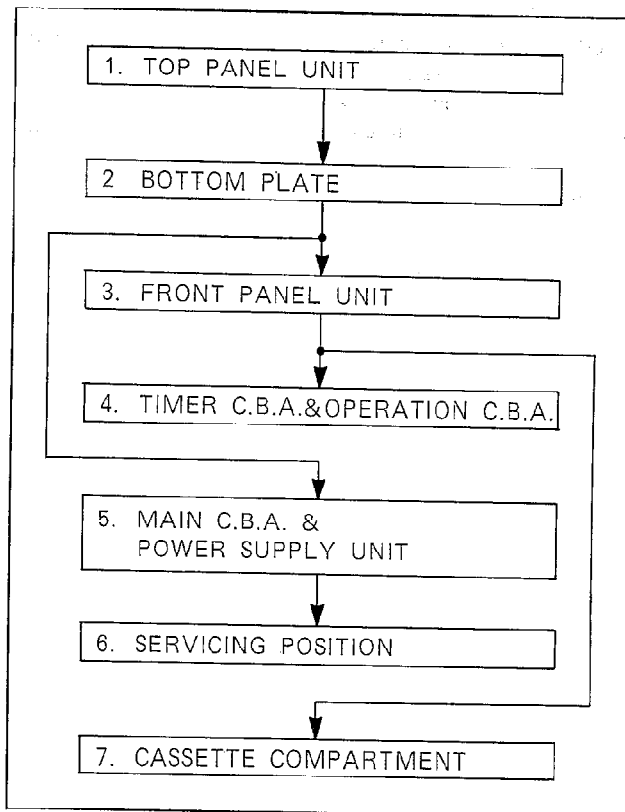


Fig.D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL UNIT

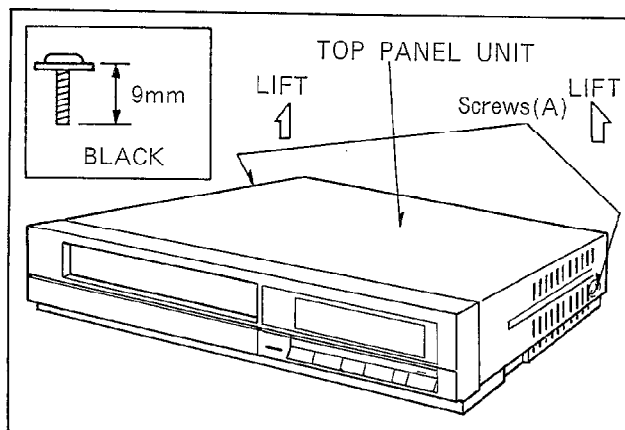


Fig.D2

Remove.....2 Screws(A)

2. REMOVAL OF THE BOTTOM PLATE

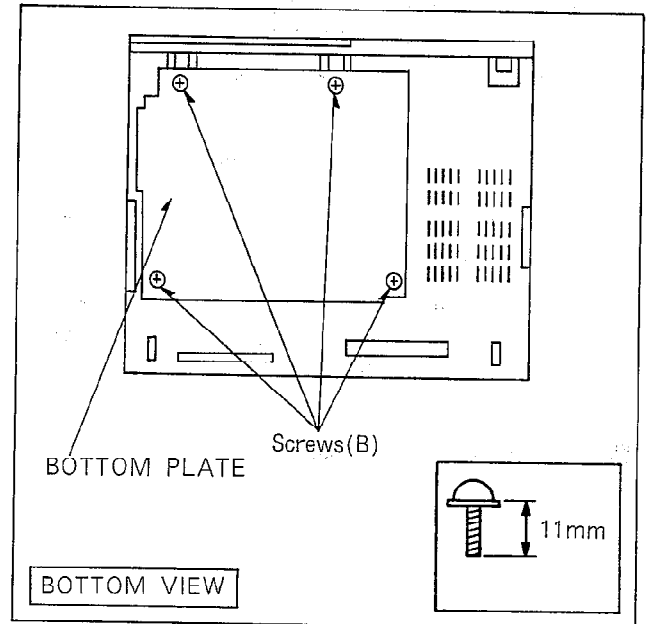


Fig.D3

Remove.....4 Screws(B)

3. REMOVAL OF THE FRONT PANEL UNIT

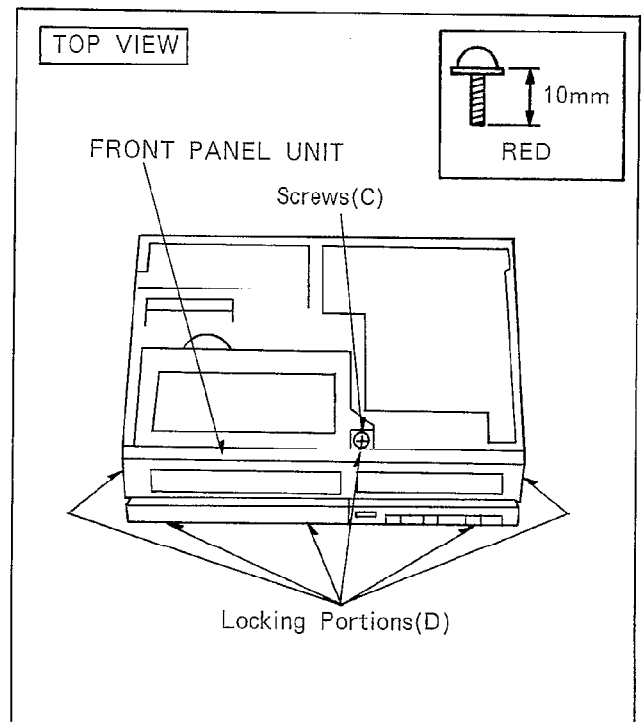


Fig.D4

Remove..... Screw(C)
Unlock..... 6 Locking Portions(D)

4. REMOVAL OF THE TIMER C.B.A. AND OPERATION C.B.A.

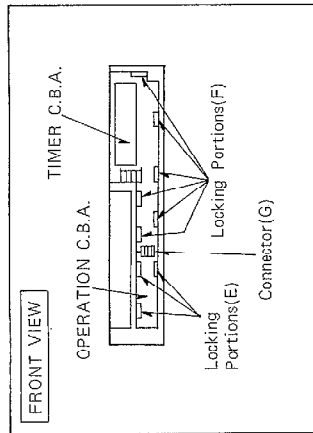


Fig.D5

REMOVAL OF THE OPERATION C.B.A.

Unlock.....3 Locking Portions(E)
Disconnect.....Connector(G)

REMOVAL OF THE TIMER C.B.A.

Unlock.....5 Locking Portions(F)

NOTE: HOW TO REMOVE THE CONNECTOR (G).

When removing the connector(G), carefully lift the top portions(H) of connector to remove.

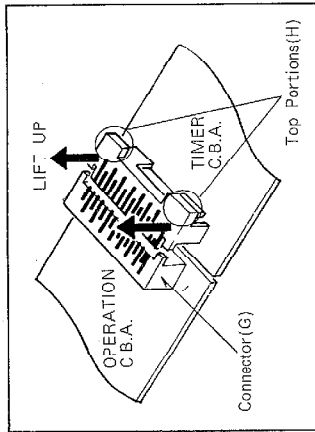


Fig.D6

NOTE:
if the connector is turred for checking the operation C.B.A. and Timer C.B.A., the short circuit could be made between reed wires. Be sure there is no short circuit between reed wires and check the both Operation & Timer C.B.As.

5. REMOVAL OF THE MAIN C.B.A. AND POWER SUPPLY UNIT

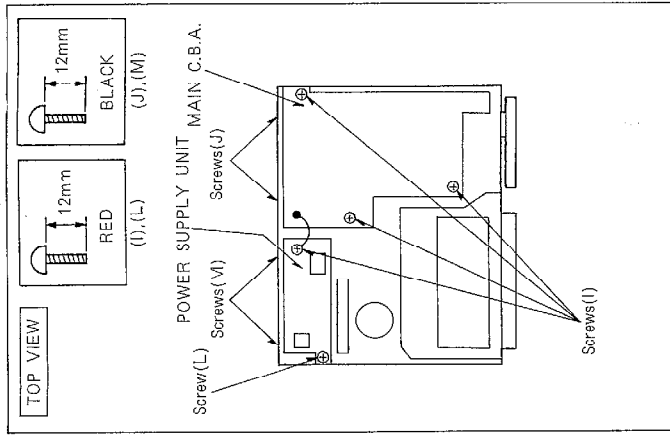


Fig.D7

REMOVAL OF THE MAIN C.B.A.

Remove.....4 Screws(I) and 2 Screws(J)

REMOVAL OF THE POWER SUPPLY UNIT

Remove.....Screw(L) and 2 Screws(M)

6. SERVICEING

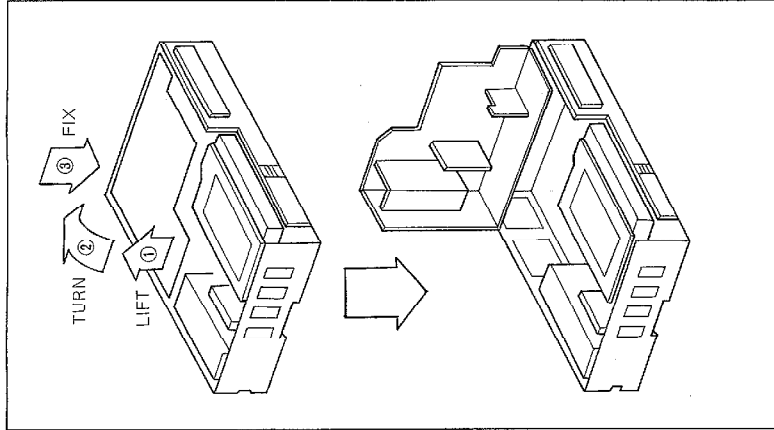


Fig.D8

7. REMOVAL OF THE CASSETTE COMPARTMENT

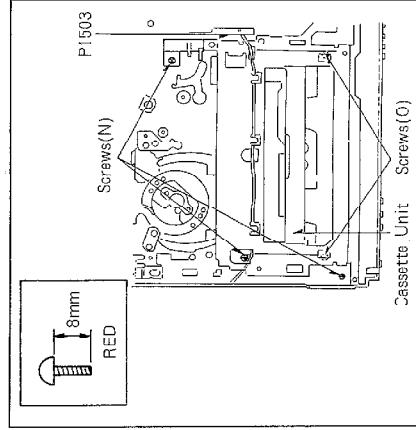


Fig.D9

Remove the 3 screws(N).
Slide the cassette holder until appearing 2 screws(O) by turning (clockwise) the Capstan Rotor Unit (located in the bottom side as shown in Fig.D10) and remove the 2 screws(O).
Remove the wire cable from connector PI503 mounted on Take-up Photo Tr. C.B.A., then carefully pull out the Cassette Compartment.

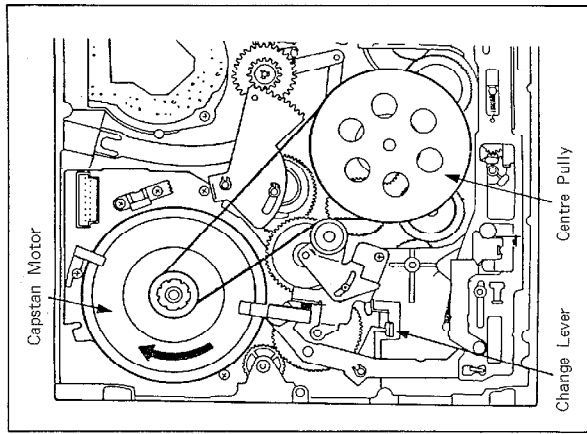


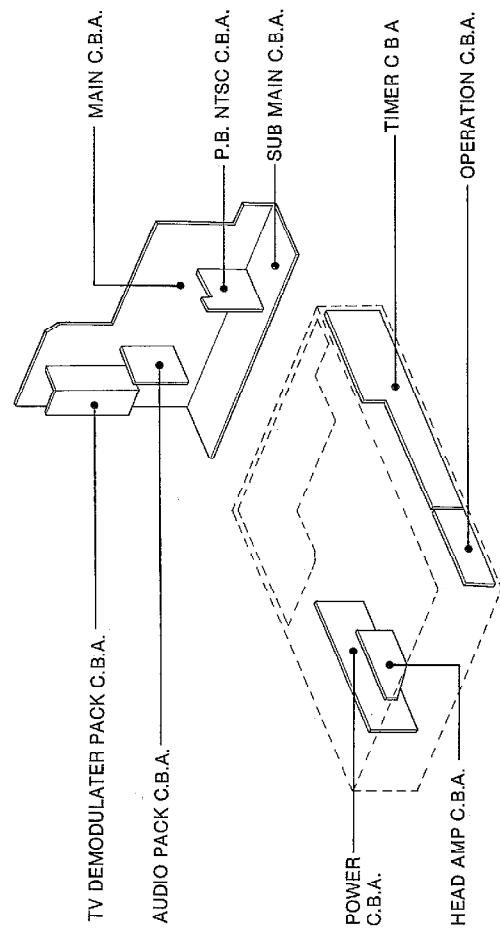
Fig.D10

NOTE:
When reinstalling the Cassette Compartment, mechanical adjustment must be performed for correct working refer to Service Manual No.G11/G-REV. Mechanical Chassis (Order No.VRD8901M101).

2-2 MECHANICAL ADJUSTMENT PROCEDURES

This mechanical chassis of these models NV-J101EM, NV-J1EN/MC are the same as G Mechanical Chassis, therefore please refer to the Service Manual No.G11/G-REV. Mechanical Chassis (Order No.VRD8901M101).

CIRCUIT BOARD LAYOUT



2-3-2 HOW TO READ THE ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette Recorder NV-J1EN/MC NV-J101EM.

2-3-1 TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
Voltage Range: 0.001~50V
2. Dual-Trace Oscilloscope
Voltage Range: 0.005~50V/div,
Frequency Range: DC~30MHz
Probes: 10:1 or 1:1
3. Frequency Counter
Frequency Range: 0~10MHz
4. Signal Generator (Sinewave)
Frequency Range: 0~300KHz
5. Video Sweep Generator
Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape (VFJ8125-43F)

Mode of VTR Example : SELF Recorded the Video Signal and Play Back the just recorded portion	Adjustment Component	MODE INPUT SELF RECORDING VIDEO SIGNAL	SPEC. 0.4±0.4msec.	Specification for Adjustment	Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air
Connecting Point (Test Point) of Measuring Equipment	ADJ. R2002	TP TP2010 TP2002	M.EQ. OSCILLO- SCOPE	Measuring Equipment	Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3=
ALIGNMENT TAPE VFJ8125H3F		TAPE			

Fig. E1

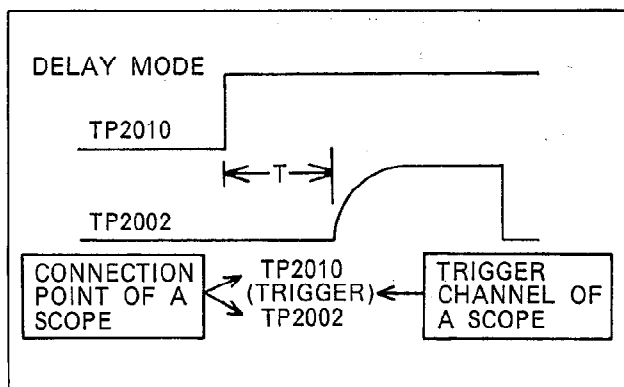


Fig.E2

NOTE:

Before the electrical adjustment, set the VHS VTR as following conditions except for especial instructions in each adjustment item.

- 1) Picture Sharpness Control...Centre Fix Position
- 2) Test Signal Switch...OFF Position
- 3) Noise Filter/Edit Selector...OFF Position
- 4) Digital Tracking On/Off Switch...ON Position

SERVO SECTION

2-3-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAY	
TAPE	M.EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO- SCOPE	6.5+/-0.5H	

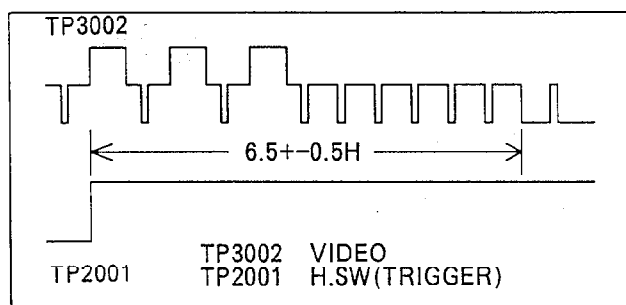


Fig.E3

2-3-4. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR2010	SELF RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	TV MONITOR		

1. Playback the just recorded portion and place the deck in STILL mode.
2. Adjust the VR2010 so that the V-dancing does not appear on the TV monitor screen.

2-3-5. ARTIFICIAL V-SYNC FOR ARTIFICIAL NTSC ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR2009	STILL	
TAPE	M.EQ.	SPEC.	
NTSC RECORDED TAPE	TV MONITOR		

1. Playback the NTSC recorded tape and place the deck in STILL mode.
2. Adjust the VR2009 so that the V-dancing does not appear on the TV monitor screen.

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-3-6. CHROMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR502	RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	32+/-2mVp-p	

1. Connect the oscilloscope to TP507(HOT) and TP508(GND).
2. Connect a jumper wire between P3001-1 and GND. And then place the unit to Recording mode.
3. Adjust VR502 so that chroma level becomes 32+/-2mVp-p.

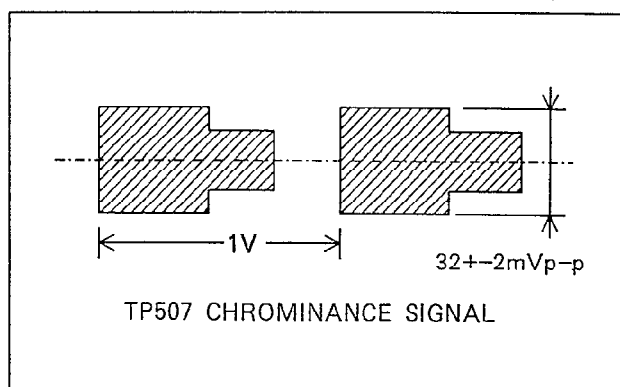


Fig.E4

2-3-7. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501	RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	130+-5mVp-p	

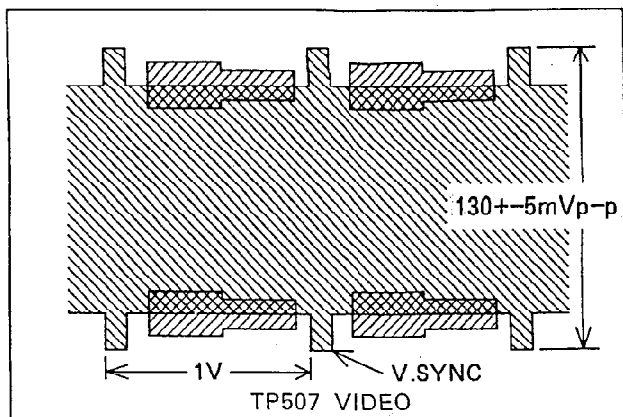


Fig.E5

2-3-8. PLAYBACK CHROMA CYAN LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002 (VIDEO OUT)	VR803	SELF RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	0.55+-0.05Vp-p	

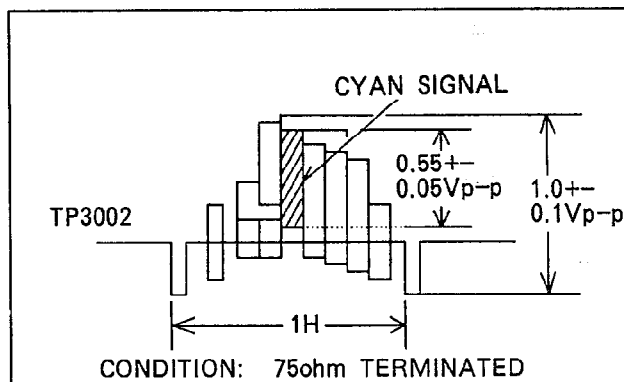


Fig.E6

2-3-9. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002 (VIDEO OUT)	VR3012	SELF RECORDING	VIDEO SWEEP
TAPE	M.EQ.	SPEC.	
BLANK TAPE	VIDEO SWEEP/OSCILLOSCOPE		

1. Set the sweep generator output as shown in below.

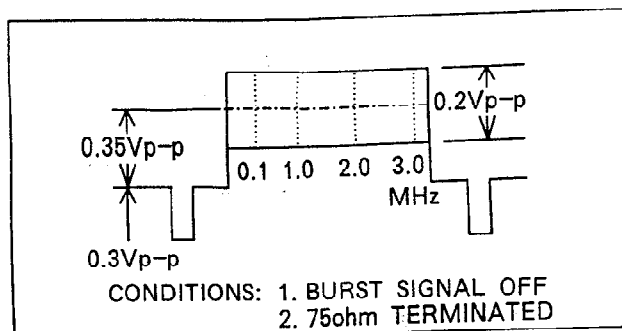


Fig.E7

2. Picture Sharpness Control is centre fix position.
3. Adjust the VR3012 so that the waveform becomes as shown in below.

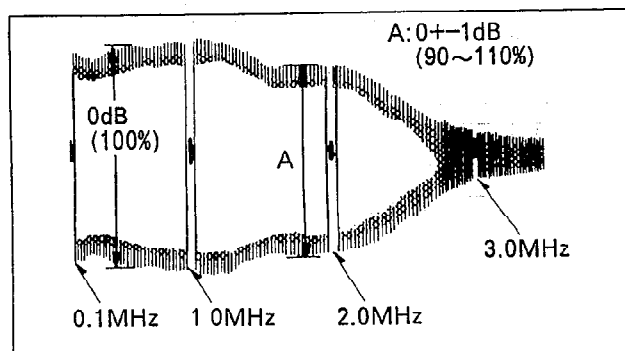


Fig.E8

2-3-10. SECAM KILLER ADJUSTMENT. (NV-J1MC/NV-J101EM)

TP	ADJ.	MODE	INPUT
IC851-11	T851	RECORDING	SECAM VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	Portion A is peak to negative direction.	

1. Record the SECAM Colour Bar.
2. Connect the Oscilloscope to IC851-11.
3. Adjust T851 so that portion "A" is peak to negative direction as shown in Fig.E9.

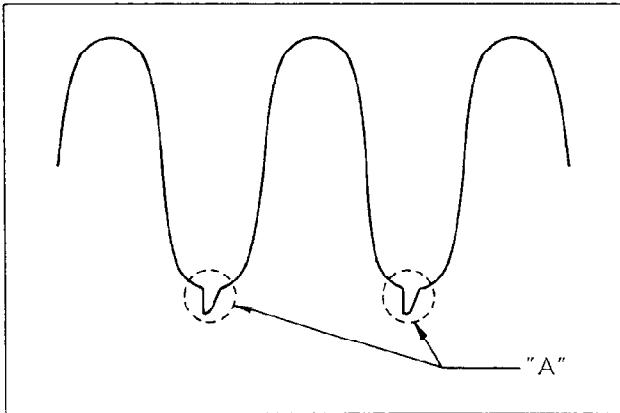


Fig.E9

2-3-11. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
C306--(+)	VR302	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	WAVEFORM IS MINIMIZED	

1. Connect the oscilloscope to (+)side of C306 on Sub Main C.B.A..
2. Adjust VR302 so that the waveform is minimized as shown below.

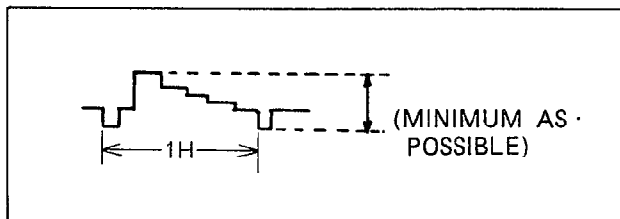


Fig.E10

2-3-12. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC3801-9	VR3801	STOP	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
	FREQUENCY COUNTER	15735 $\pm$ 100Hz	

1. Connect the frequency counter to Pin9 of IC3801.
2. Adjust VR3801 so that the reading of the frequency counter is 15735 $\pm$ 100Hz.

AUDIO SECTION

2-3-13. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (+) TP4003(-)	VR4002	RECORDING	
TAPE	M.EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	2.2 $\pm$ 0.1mVrms	

2-3-14. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4001 (AUDIO OUT)	VR4001	SELF RECORDING	1KHz, -10dB AUDIO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M	E-E Level -6 $\pm$ 2dB P.B Level= E-E Level $\pm$ 0.5dB	

NOTE: Before this adjustment, "Tape Interchangeability Adjustment" and "Audio Bias Current Adjustment" must be completed.

TIMER SECTION

NOTE: Do not connect the AC power plug.

2-3-15. TIMER REFERENCE CLOCK ADJUSTMENT

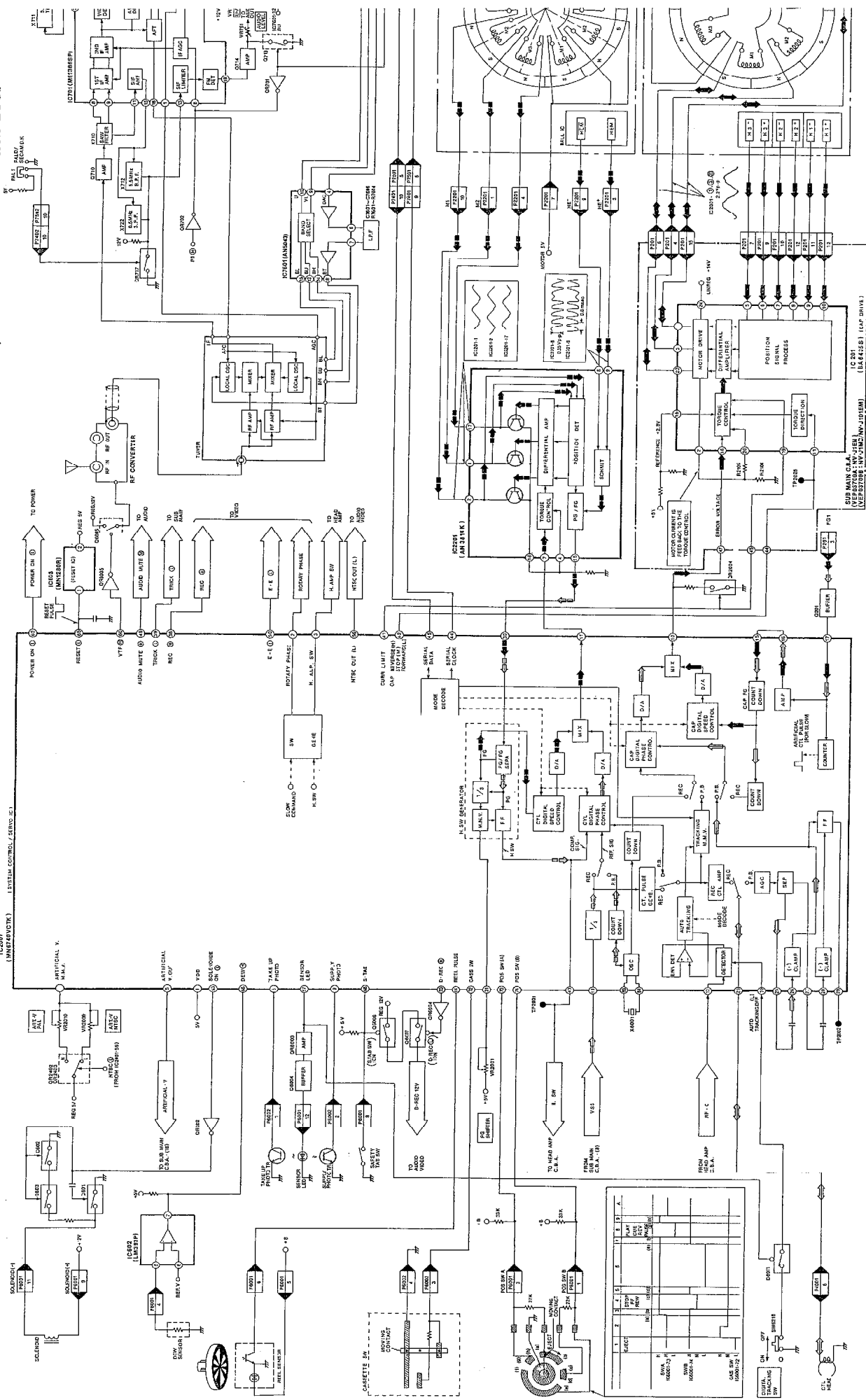
TP	ADJ.	MODE	INPUT
TP7501	C7501		
TAPE	M.EQ.	SPEC.	
	UNIVERSAL COUNTER	488.2812 $\pm$ 0.001us	

1. Connect a jumper wire between P7501-4 and 5.
2. Connect a jumper wire between P7501-7 and GND.
3. Connect a diode(MA165) between IC7501-36 and 56.

Memo

2

3-1 SYSTEM CONTROL, SERVO & TIMER BLOCK DIAGRAM



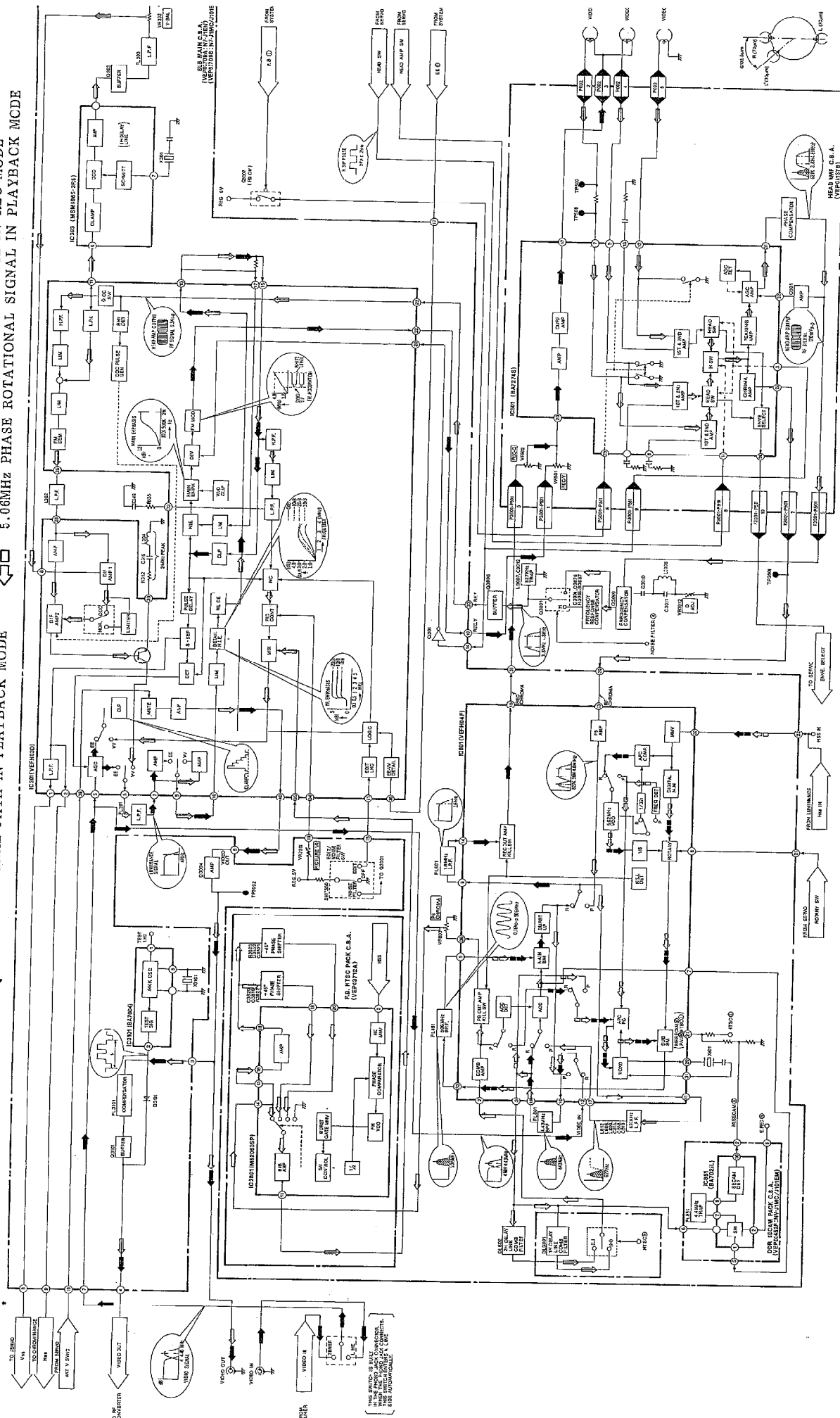
PHASE LOOP



3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE

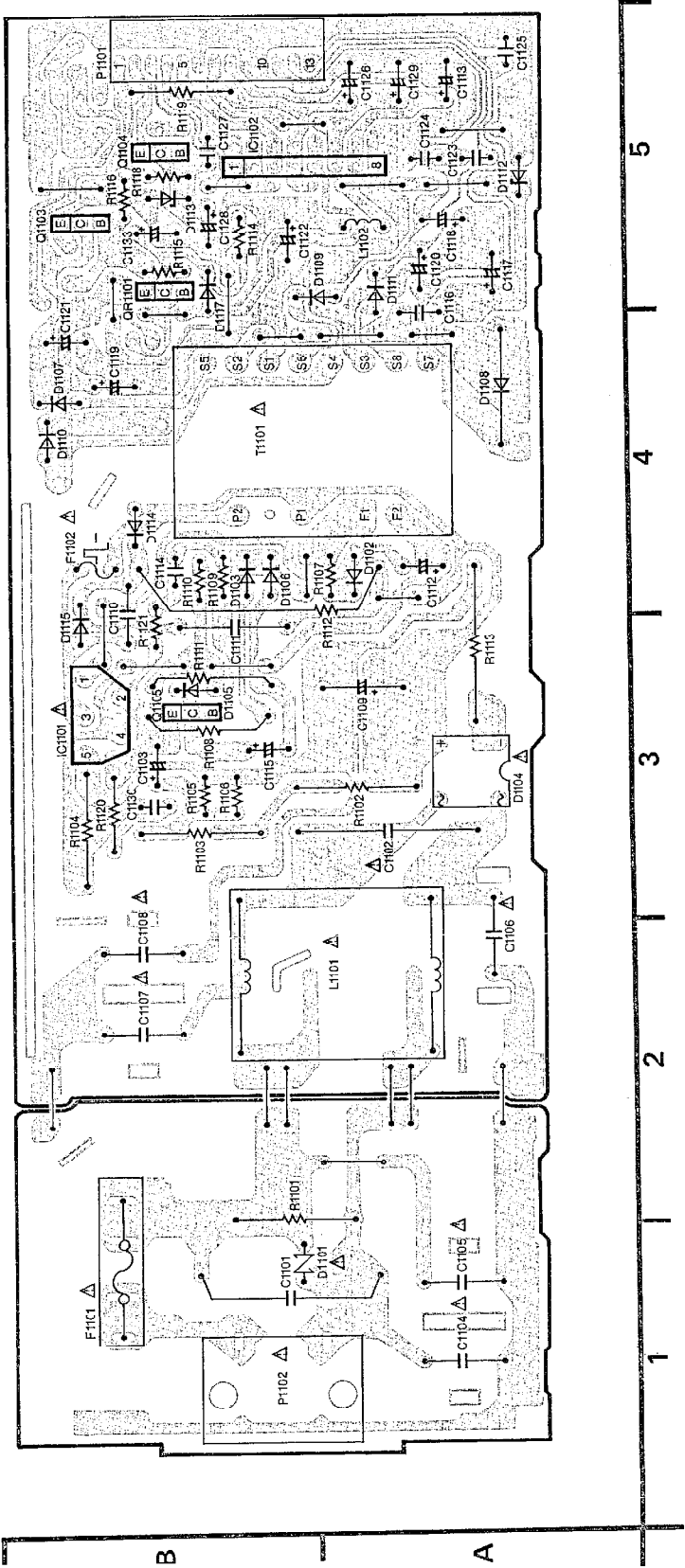
5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE
5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE



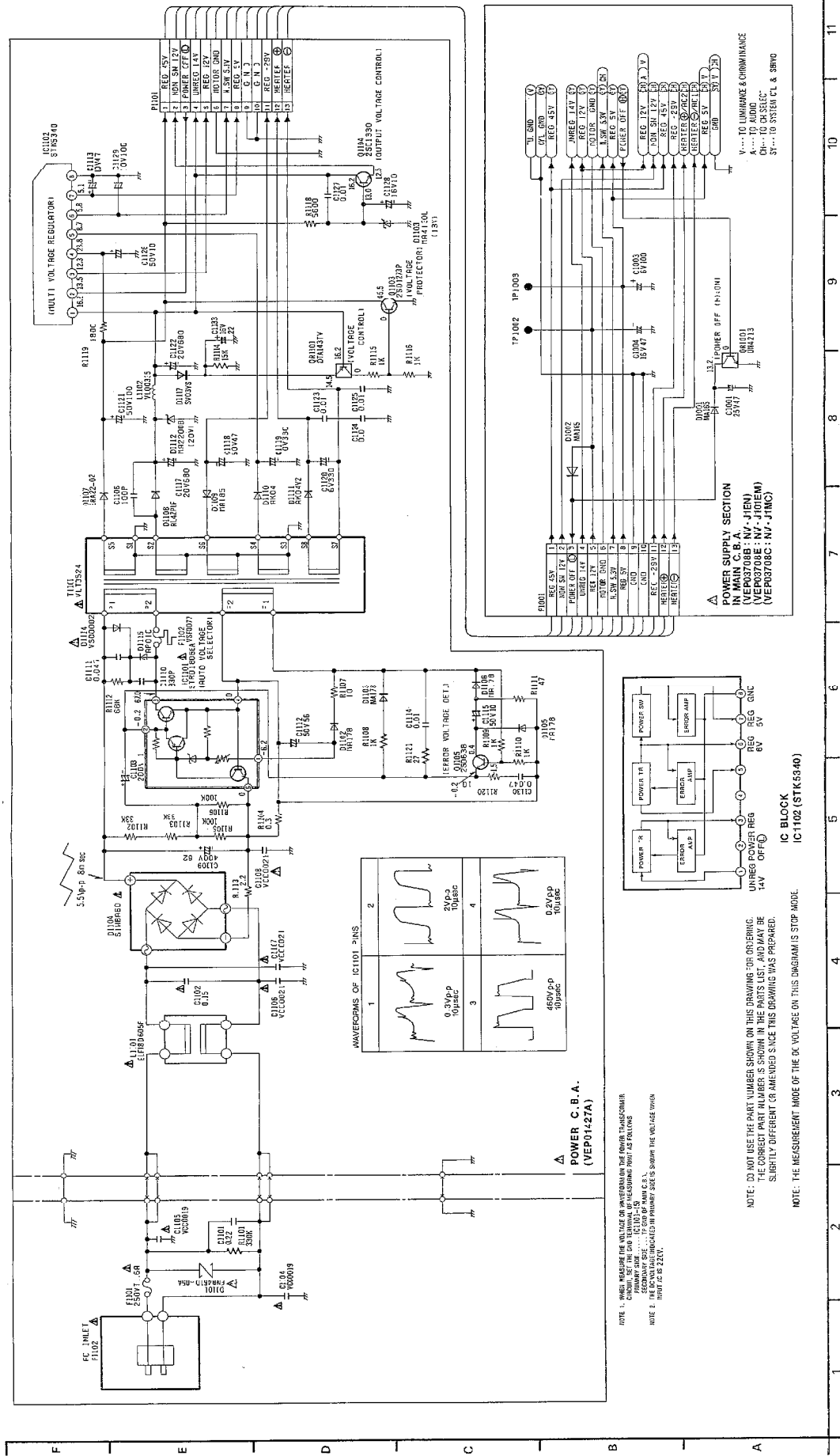
3-3 POWER CBA (VEP01427A)

POWER C.E.A.	
Translator	
Q103	B-5
Q104	B-5
Q105	B-3
Translator & Resistor	
Q1101	B-5
Integrated Circuit	
IC101	B-3
IC102	B-5
Connector	
P101	B-5
P102	B-1

ADDRESS INFORMATION



3-4. POWER SCHEMATIC DIAGRAM



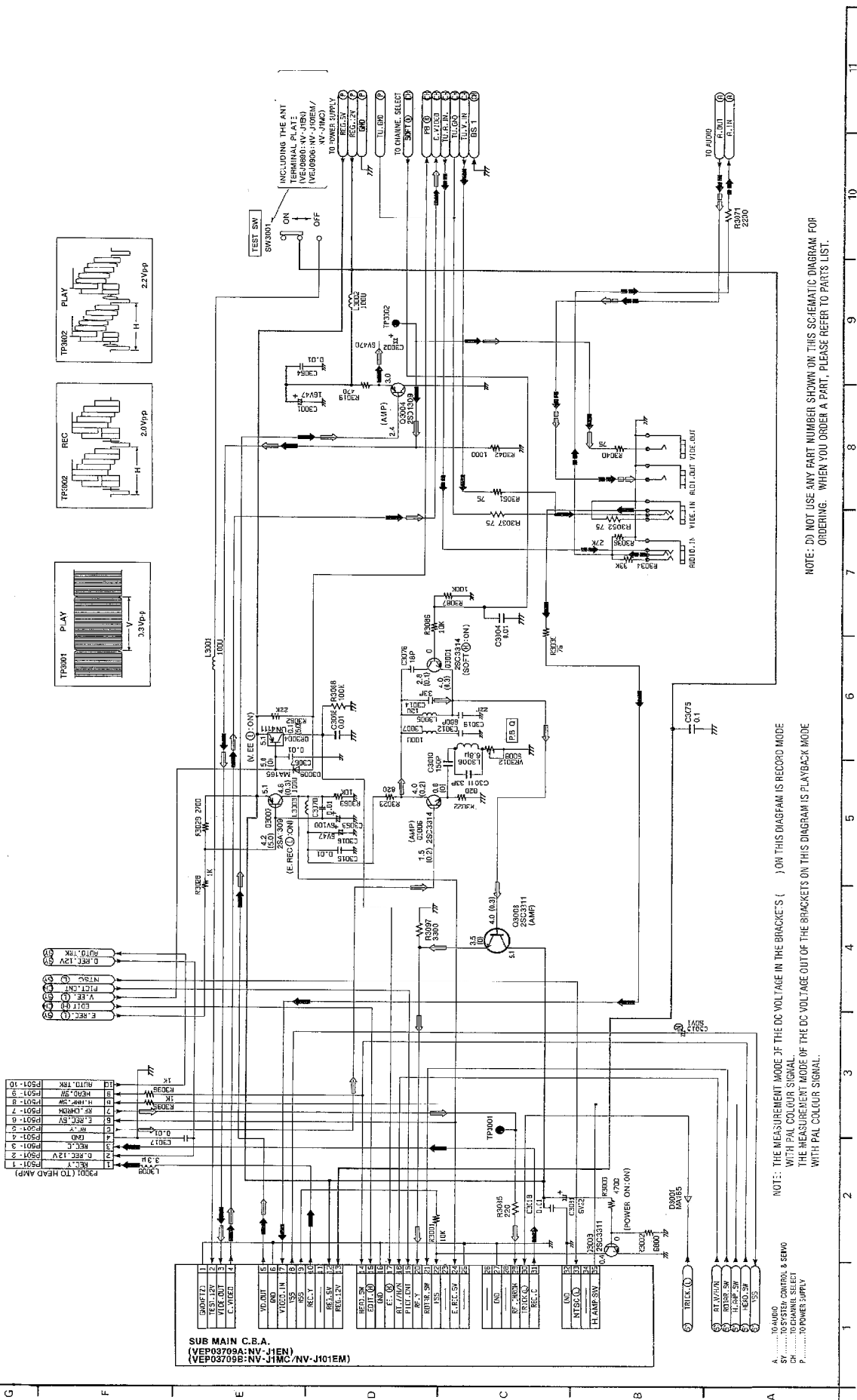
3-5 LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE

↓ AUDIO MAIN SIGNAL PATH IN REC. MODE

⇐ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

⏮️ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

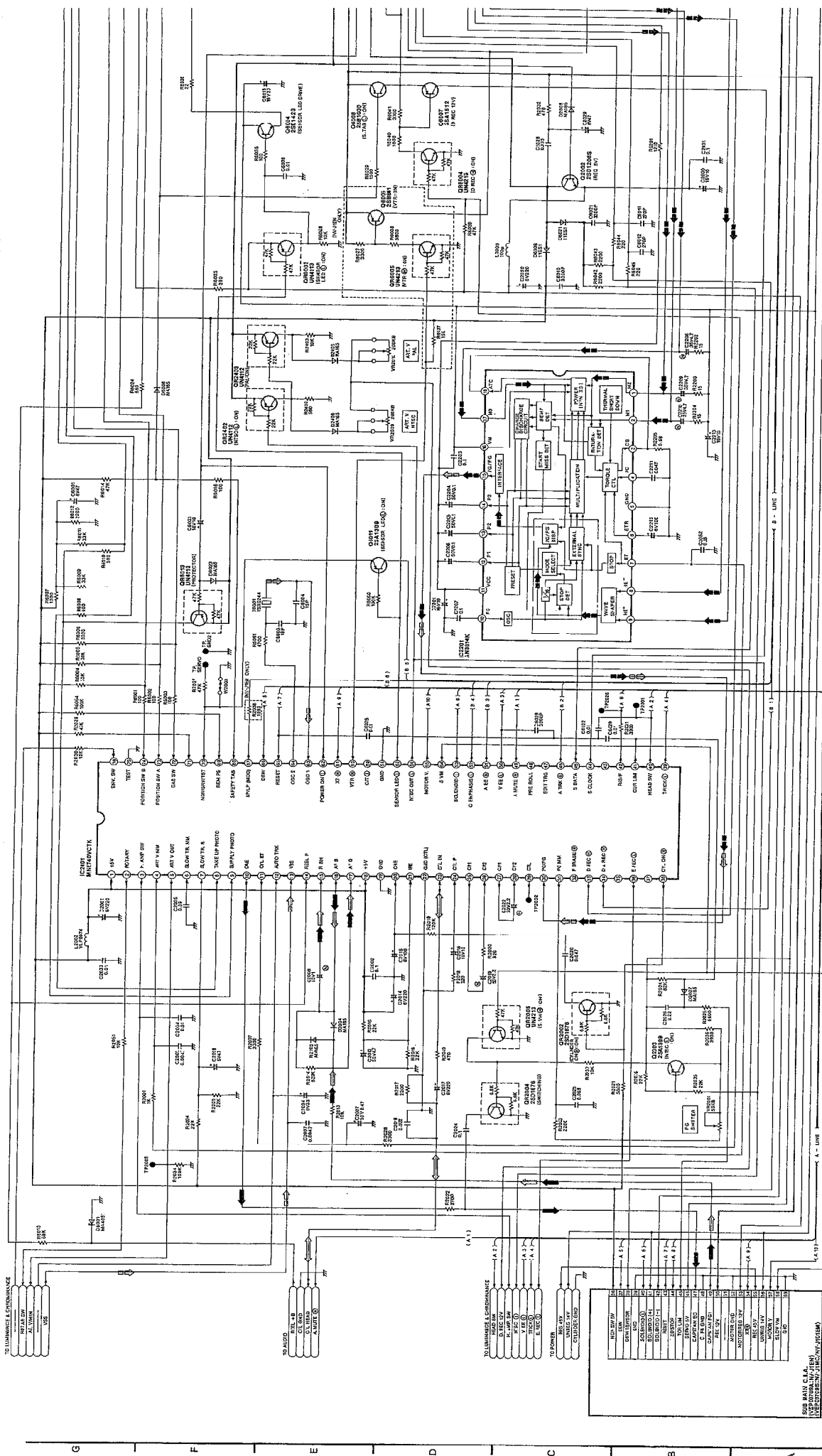


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKET'S () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-6 SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM

-  CAPSTAN SERVO SPEED LOOP.
-  CYLINDER SERVO SPEED LOOP.
-  CAPSTAN SERVO PHASE LOOP.
-  CYLINDER SERVO PHASE LOOP.



SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

REF. NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MODE	5.1	0	0	0	0	0	2.5	3.3	3.3	2.5	4.3	1.6	2.5	0.3	2.5	2.5	2.5	5.1	0	2.5
S'OP	5.1	3.1	0	0	0	0	2.8	3.3	3.3	2.4	2.5	0	2.5	0	2.5	2.5	2.5	5.1	0	2.5
PLAY	5.1	0	0	0	0	0	2.8	3.3	3.3	2.5	4.3	1.6	2.5	0.3	2.5	2.5	2.5	5.1	0	2.5
FF.	5.1	0	0	0	0	0	2.8	3.3	3.3	2.5	4.3	1.6	2.5	0.3	2.5	2.5	2.5	5.1	0	2.5

REF. NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
MODE	2.5	0	2.5	2.5	1.1	2.8	3.9	2.1	0	5.2	0	0	0	0	3.1	0.2	5.1	0	5.1	0
S'OP	2.5	0	2.5	2.5	1.2	2.8	4.0	3.1	4.3	1.3	5.5	0	0	0	3.4	0.2	5.1	5.0	5.1	5.1
PLAY	2.5	0	2.5	2.5	1.6	1.8	3.5	3.3	2.9	5.2	0	0	0	0	3.4	0.2	5.1	0	5.1	0
FF.	2.5	0	2.5	2.5	1.6	1.8	3.5	3.3	2.9	5.2	0	0	0	0	3.4	0.2	5.1	0	5.1	0

REF. NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
MODE	5.0	2.1	0	5.0	4.7	0	0	5.1	0	0	5.0	0	5.1	0	5.1	4.3	0	5.1	4.3	0
S'OP	5.0	2.1	0	5.0	4.7	0	0	5.1	0	0	5.0	0	5.1	0	5.1	4.3	0	5.1	4.3	0
PLAY	5.0	2.1	0	5.0	4.7	0	0	5.1	0	0	5.0	0	5.1	0	5.1	4.3	0	5.1	4.3	0
FF.	5.0	2.1	0	5.0	4.7	0	0	5.1	0	0	5.0	0	5.1	0	5.1	4.3	0	5.1	4.3	0

REF. NO.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
MODE	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S'OP	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PLAY	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
FF.	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

REF. NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MODE	14.3	14.3	0	0.1	0	2.6	4.3	0.6	0.5	12	5.2	4.3	4.3	4.0	5.2	14.3	14.3	0	—	—
S'OP	10.9	10.9	0	0.8	0	2.6	2.5	0.6	0.5	28	5.2	3.8	3.8	3.9	1.3	10.5	9.8	0	—	—
PLAY	14.3	14.3	0	0	0	2.6	4.3	0.6	0.5	12	5.2	4.3	4.3	4.0	5.2	14.3	14.3	0	—	—
FF.	14.3	14.3	0	0	0	2.6	4.3	0.6	0.5	12	5.2	4.3	4.3	4.0	5.2	14.3	14.3	0	—	—

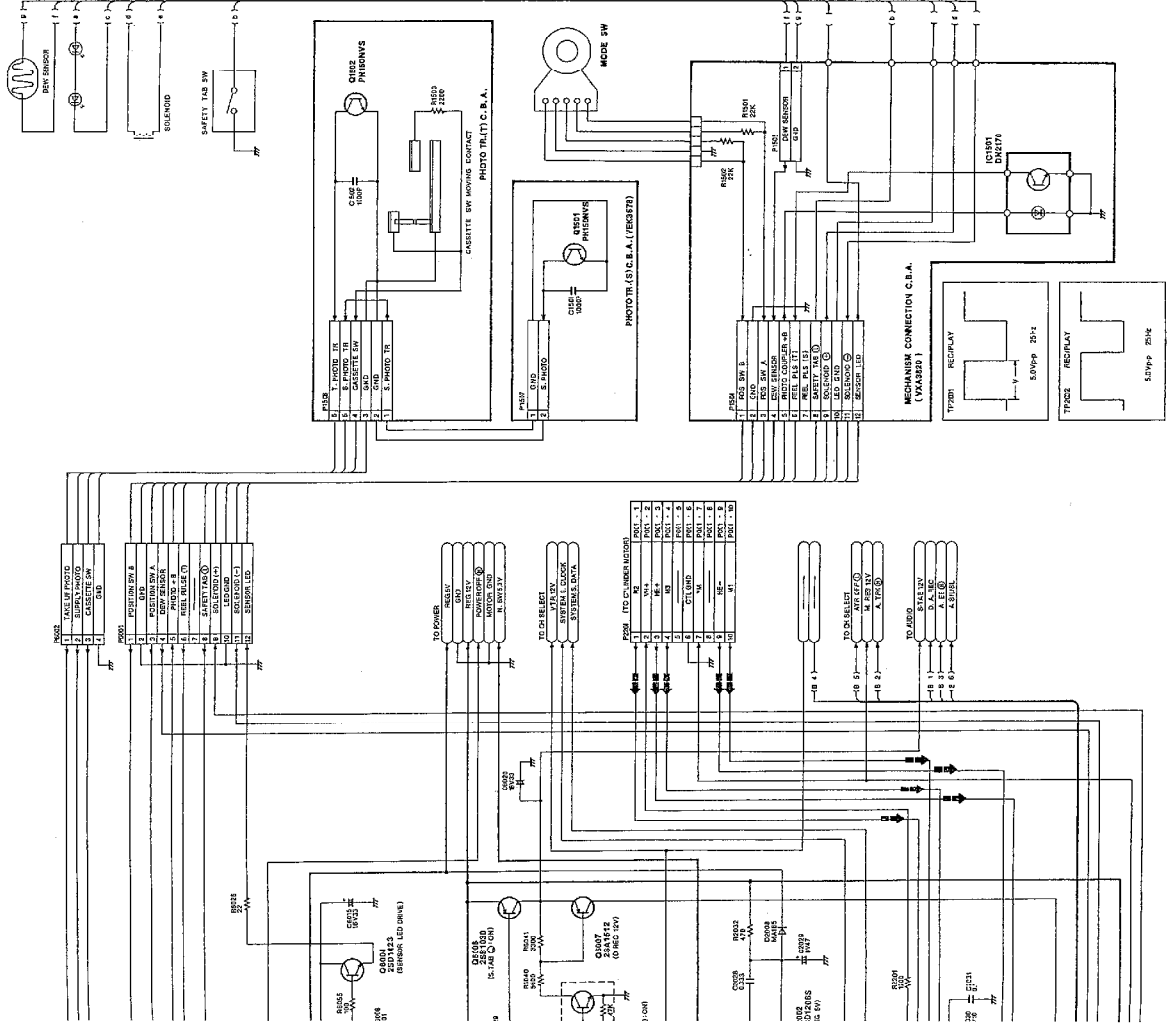
SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART

REF. NO.	Q282	Q283	Q284	Q285	Q286	Q287
MODE	E	C	B	E	C	B
S'OP	5.2	5.1	5.9	4.9	4.1	5.0
PLAY	5.2	5.1	5.9	4.9	4.1	5.0
FF.	5.2	5.1	5.9	4.9	4.1	5.0

REF. NO.	Q288	Q289	Q290	Q291	Q292	Q293
MODE	E	C	B	E	C	B
S'OP	4.5	0	4.5	0	4.7	0
PLAY	4.5	0	4.7	0	4.7	0
FF.	4.5	0	4.7	0	4.7	0

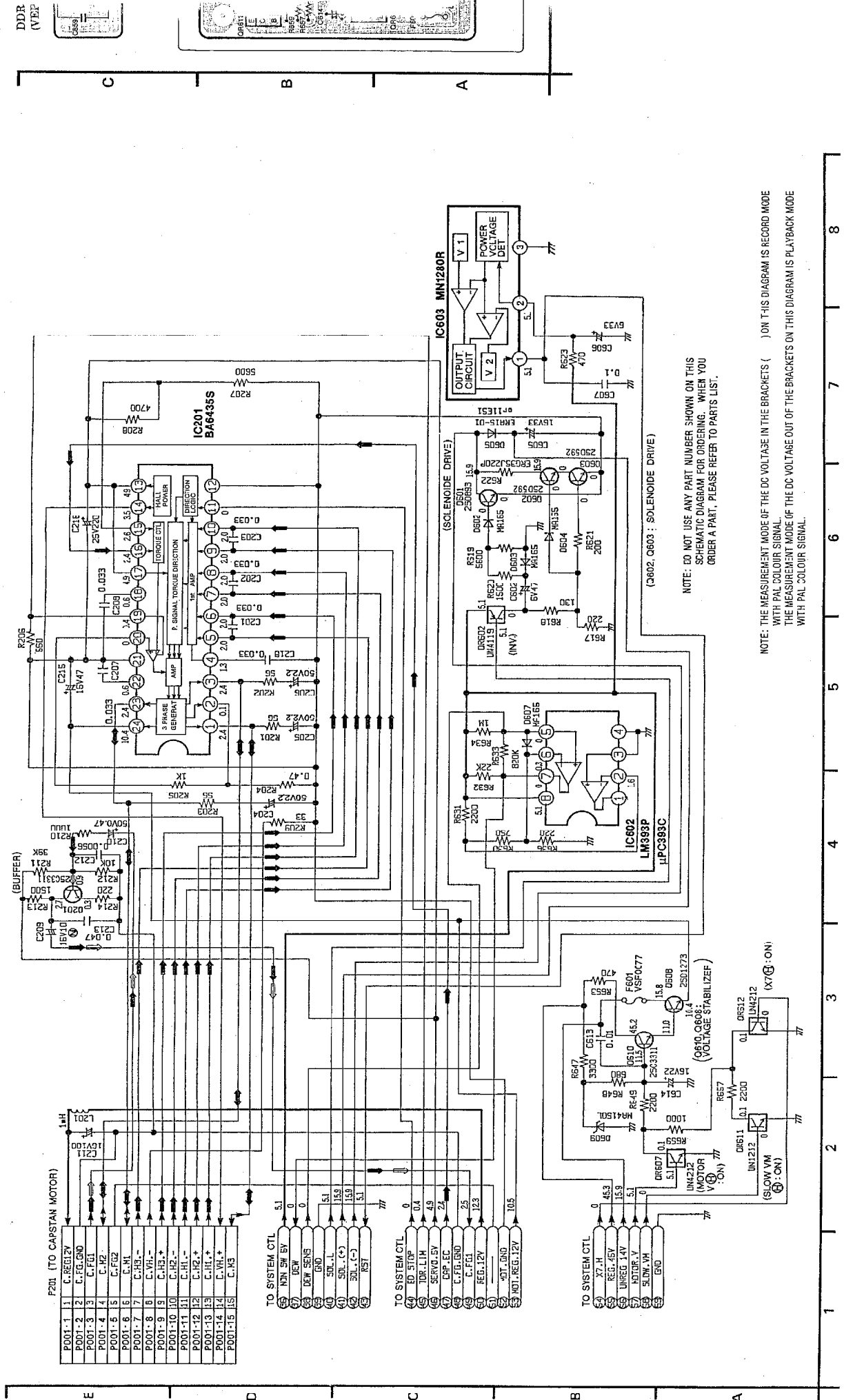
REF. NO.	Q294	Q295	Q296	Q297	Q298	Q299
MODE	E	C	B	E	C	B
S'OP	0	0.1	0	0	2.4	0
PLAY	0	0.1	0	0	2.4	0
FF.	0	0.1	0	0	2.4	0

REF. NO.	Q300	Q301	Q302	Q303	Q304	Q305
MODE	E	C	B	E	C	B
S'OP	0	12.2	0	0	5.1	5.1
PLAY	0	12.2	0	0	5.1	5.1
FF.	0	12.2	0	0	5.1	5.1



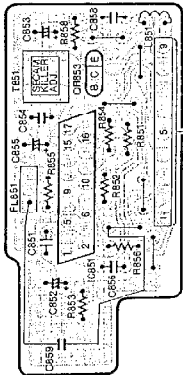
3-7. SUB MAIN (SUB SERVO) SCHEMATIC DIAGRAM

3-8. SUB [

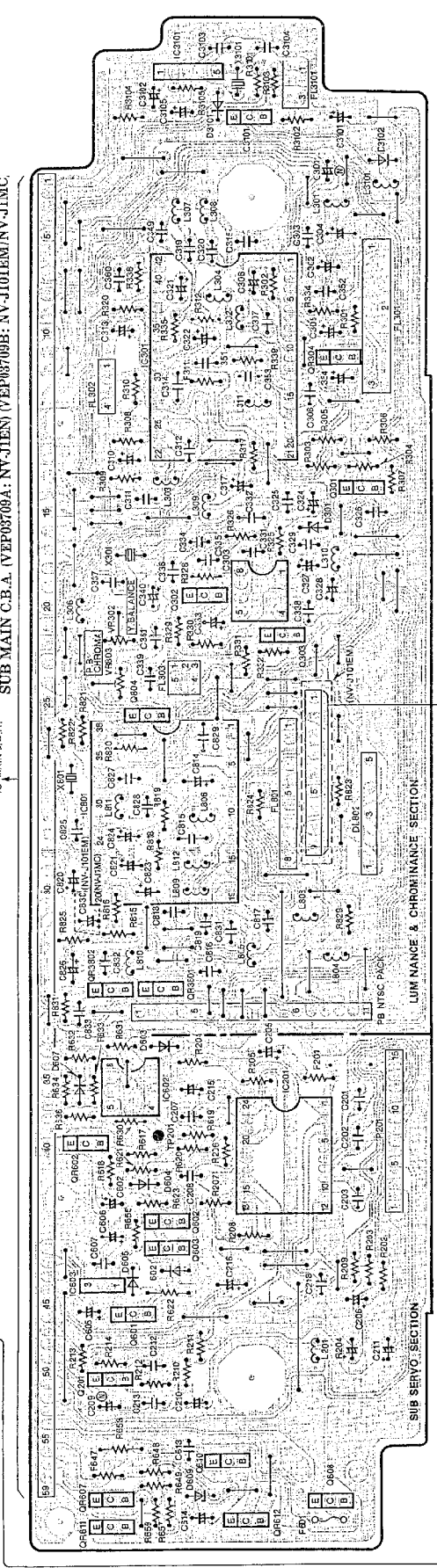


3-8 SUB MAIN C B A (VEP03709A: NV-J1EN) (VEP03709B: NV-J101EM/NV-J1MC)

DDR SECAM PACK C.B.A.
(VEP03452P: NV-J101EM/NV-J1MC)



TO MAIN C.B.A. SUB MAIN C.B.A. (VEP03709A: NV-J1EN) (VEP03709B: NV-J101EM/NV-J1MC)



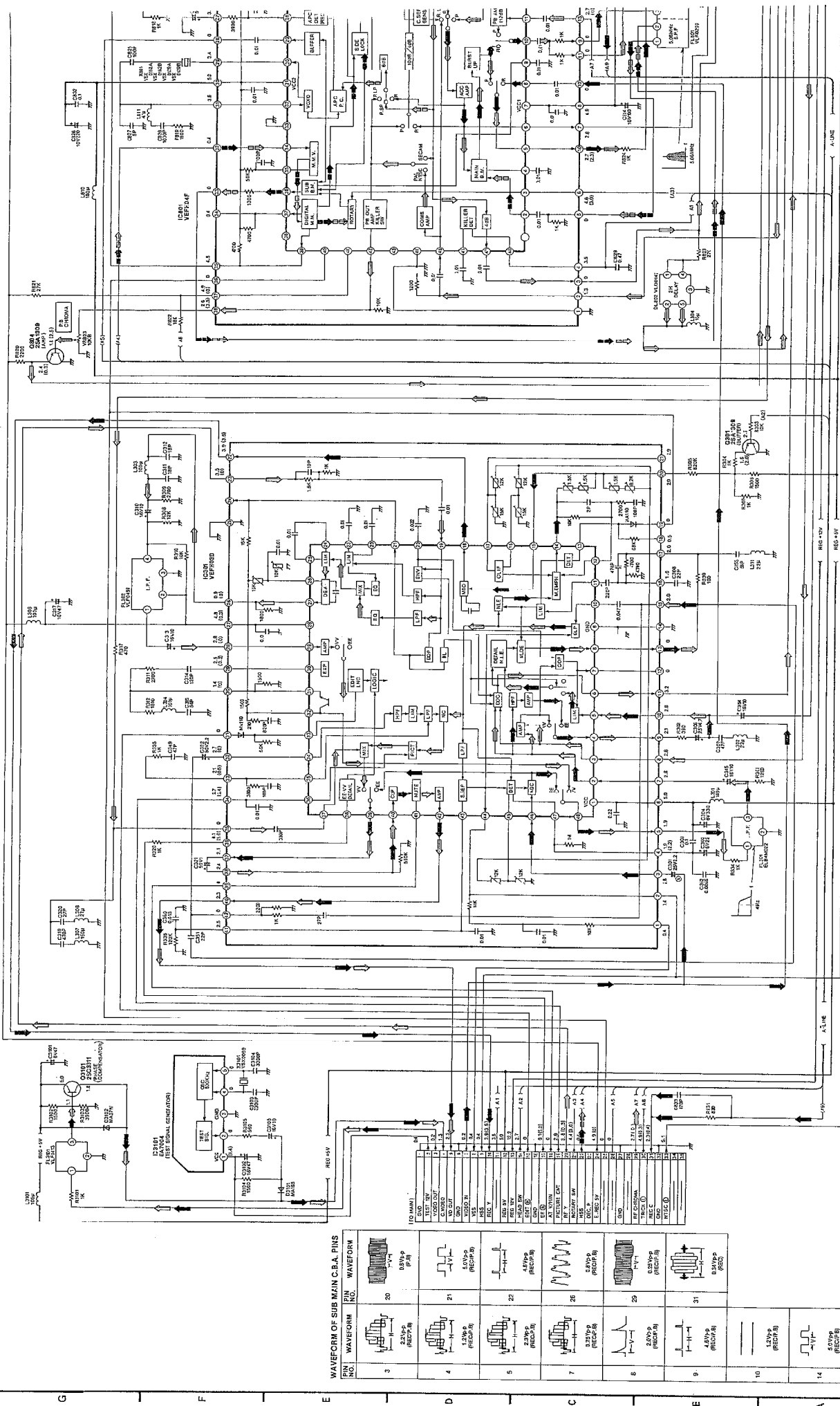
SUB MAIN C.B.A.									
Transistor		Integrated Circuit						Connector	
Q201	B-1	QR302	E-2	IC3851	C-1	Test Point	P201	A-3	
Q301	A-8	QR307	E-1	IC3101	B-3				
Q302	B-5	QR311	E-1						
Q303	A-5	QR312	A-1						
Q303	A-5	QR353	C-2	TP201	B-3				
Q801	B-2	QR301	E-3	Adjustment					
Q802	B-2	QR302	E-3	VR302	B-5				
Q303	B-2			VR303	B-5				
Q308	A-1								
Transistor & Fezistor									
QR301	A-6								

ADDRESS INFORMATION

3-9. SUB MAIN (LUMINANCE & CHROMINANCE) SCHEMATIC DIAGRAM

 MAIN SIGNAL PATH IN REC MODE
 MAIN SIGNAL PATH IN PLAYBACK MODE

 5.06MHz PHASE ROTATIONAL
 5.06MHz PHASE ROTATIONAL



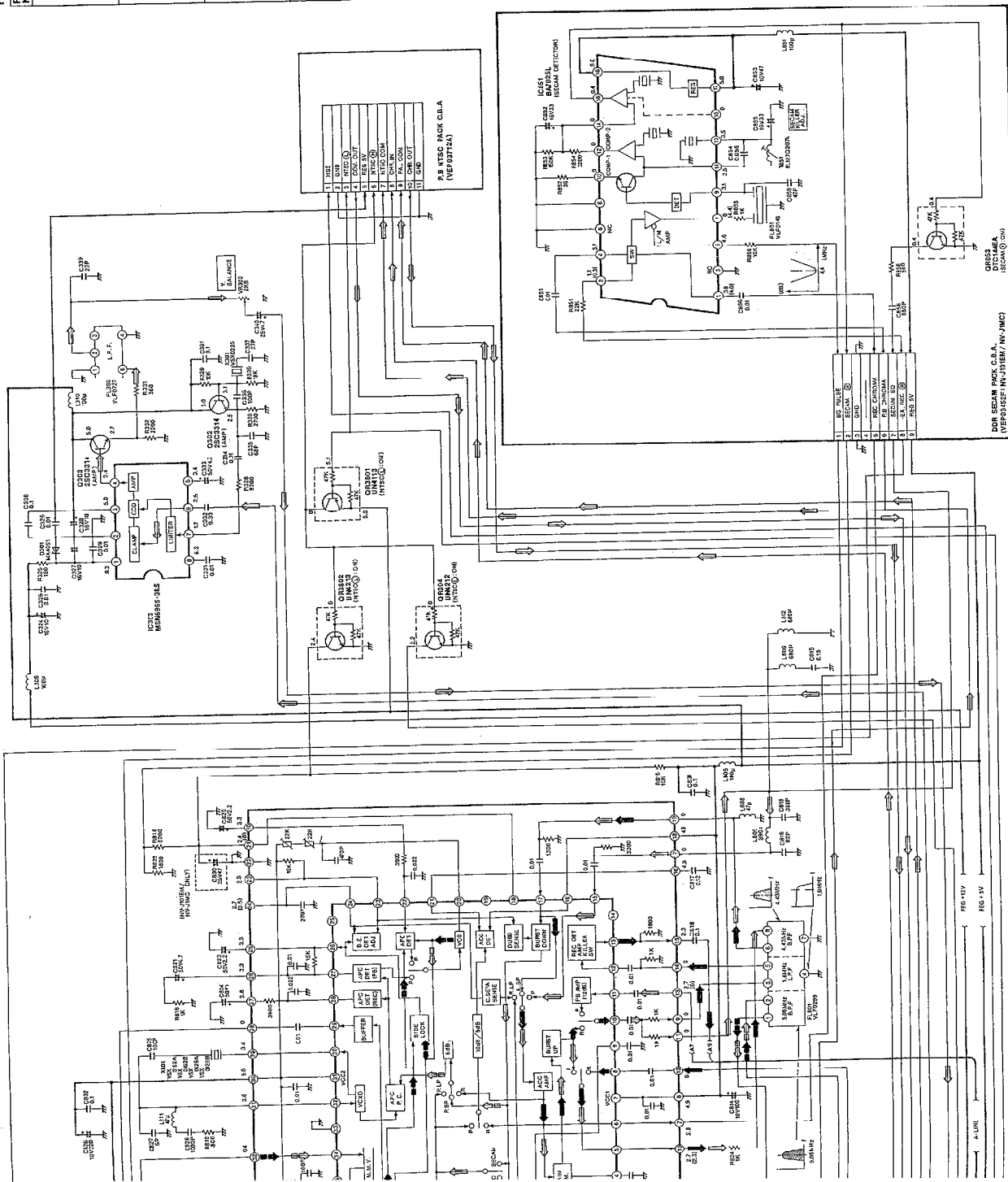
WAVEFORM OF SUB MAIN C.B.A. PINS

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
3	2.2Vp-p (REC TP)	20	0.8Vp-p (P-P)
4	5.0Vp-p (REC TP)	21	5.0Vp-p (REC TP)
5	2.3Vp-p (REC TP)	22	4.8Vp-p (REC TP)
7	3.2Vp-p (REC TP)	26	3.8Vp-p (REC TP)
8	0.8Vp-p (REC TP)	29	0.8Vp-p (REC TP)
9	4.0Vp-p (REC TP)	31	0.8Vp-p (REC TP)
10	1.3Vp-p (REC TP)		
14	5.0Vp-p (REC TP)		

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MADE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.

HASE ROTATIONAL SIGNAL IN REC MODE
HASE ROTATIONAL SIGNAL IN PLAYBACK MODE



DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE

11 12 13 14 15 16 17 18 19

IC301 (VEFH03D)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1		17	
2		22	
3		23	
5		26	
5		28	
7		30	
9		33	
10		35	
11		37	
13		40	
15		41	
16			

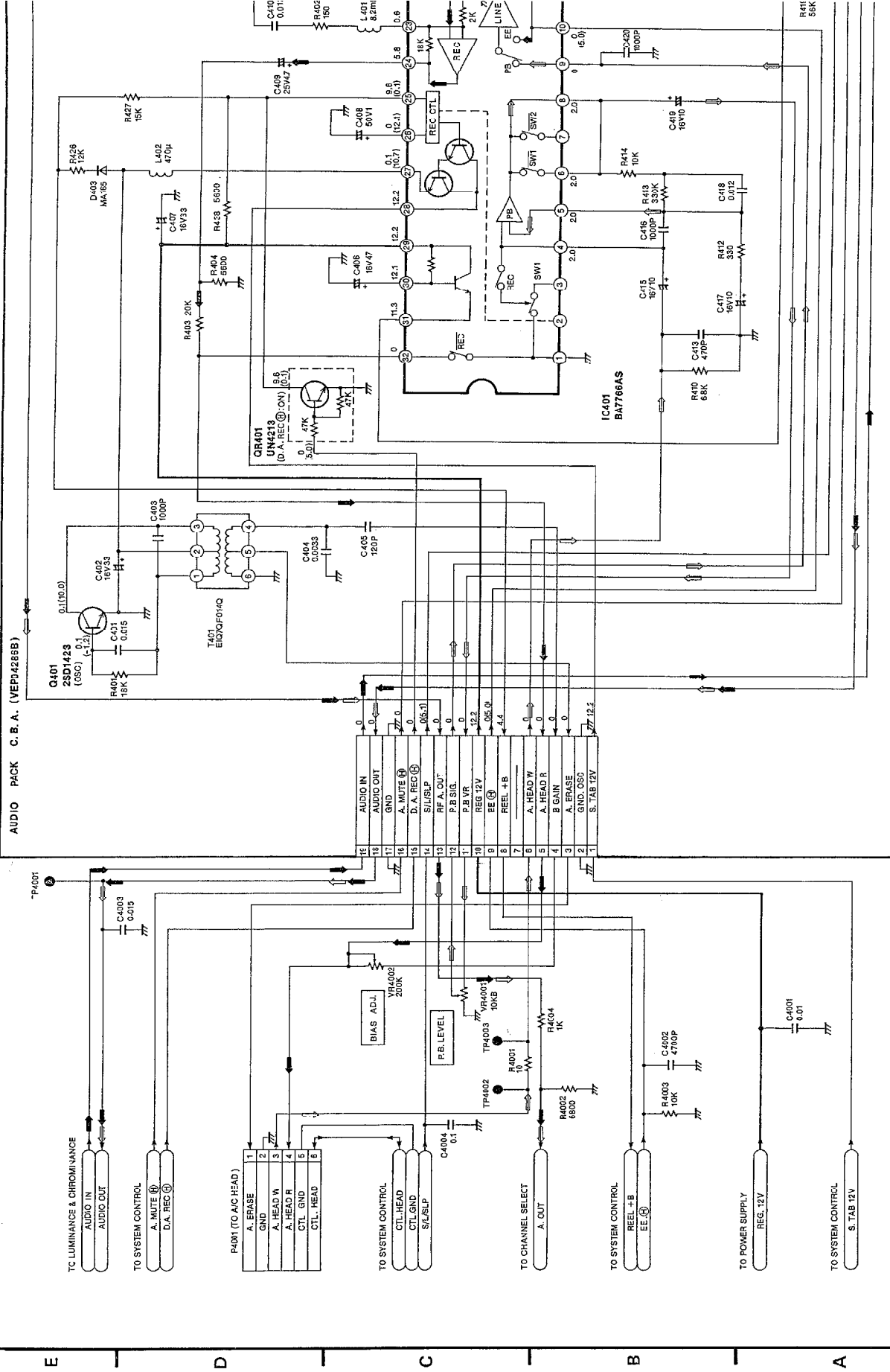
IC801 (VEFH04F)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2		15	
3		17	
5		19	
6		28	
7		29	
9		31	
10		32	
10		33	
11		34	
12		35	
13		37	
14		38	

3-10. AUDIO & AUDIO PACK SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

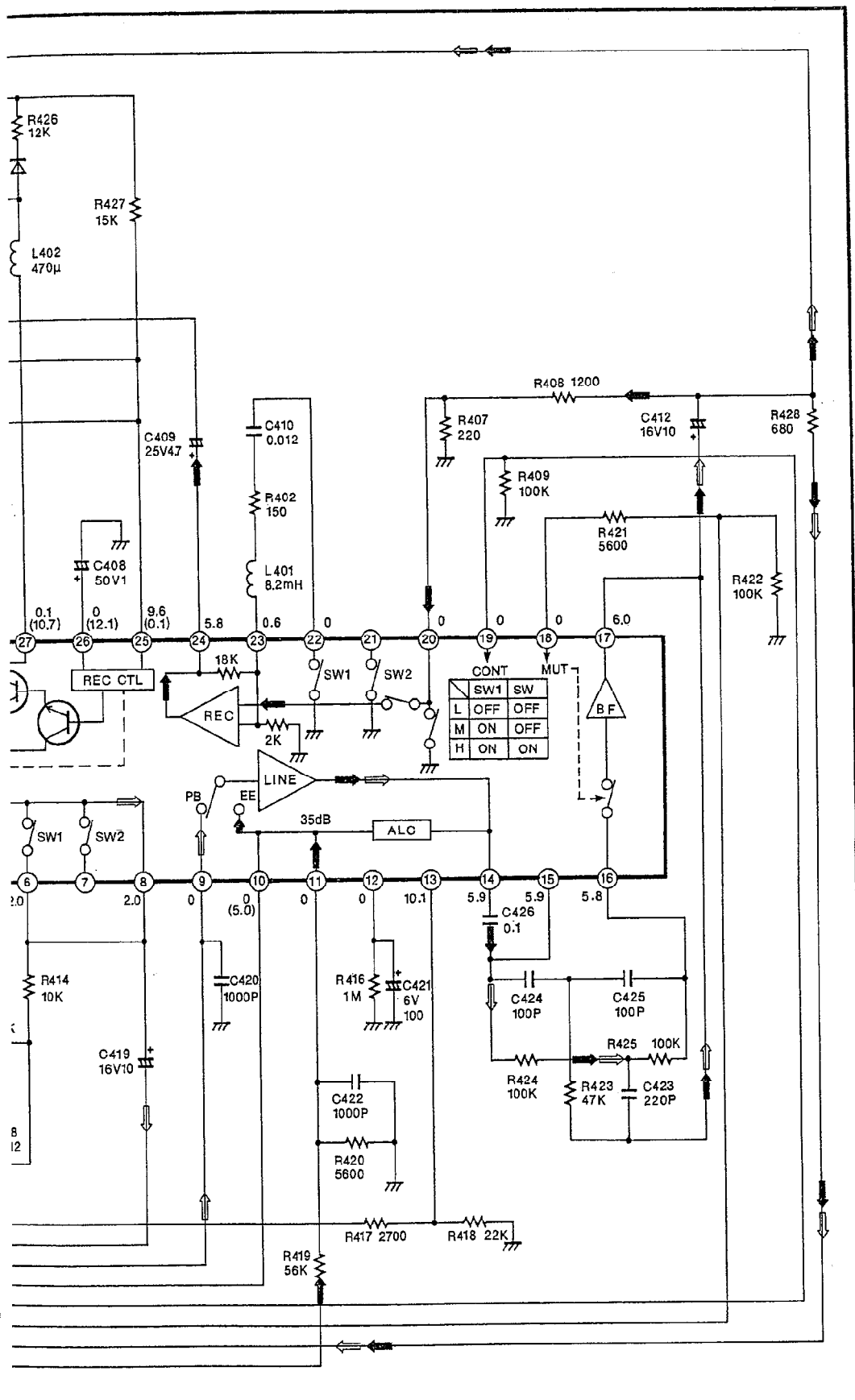


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

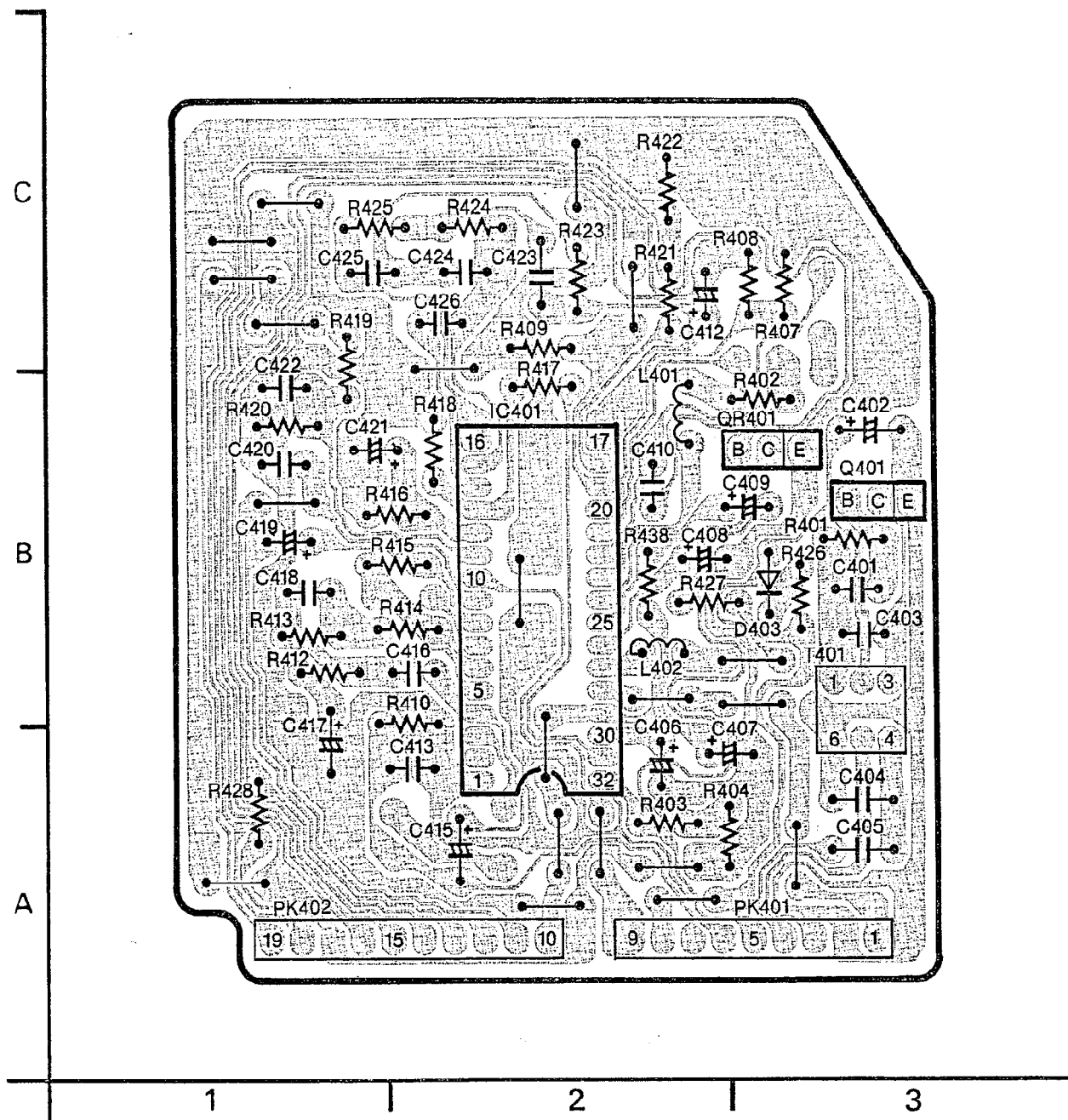
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.

THE MEASUREMENT MODE OF THE DC VOLTAGE WITH PAL COLOUR SIGNAL.

IN PLAYBACK MODE



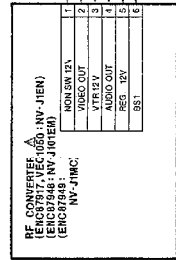
3-11 AUDIO PACK C B A (VEP04286B)



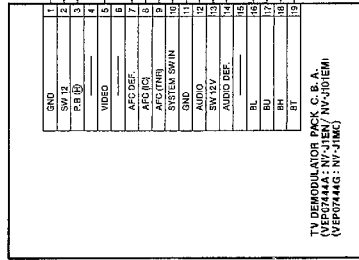
AUDIO PACK C.B.A.	
Transistor	
Q401	B-3
Transistor & Resistor	
QR401	B-3
Integrated Circuit	
IC401	B-2
Connector	
PK401	A-3
PK402	A-1

ADDRESS INFORMATION

3-12



10 LUMINANCE & CHROMINANCE



TV DEMODULATOR PACK C. B. A.
(VEP0744A: NV-J1EN/ NV-J101EM)

P7402 (TO TIMER)	
P7502-1	BAND U. E
P7502-2	BAND V. D
P7502-3	DACCLK
P7502-4	AFC DEF.
P7502-5	A. DEF. S
P7502-6	GND
P7502-7	
P7502-8	A. TRK
P7502-9	SWITCH

P7501-1	HEATER +
P7501-2	HEATER -
P7501-3	REG. 5V
P7501-4	BACK UP 5V
P7501-5	N. 5W 5V
P7501-6	GND

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

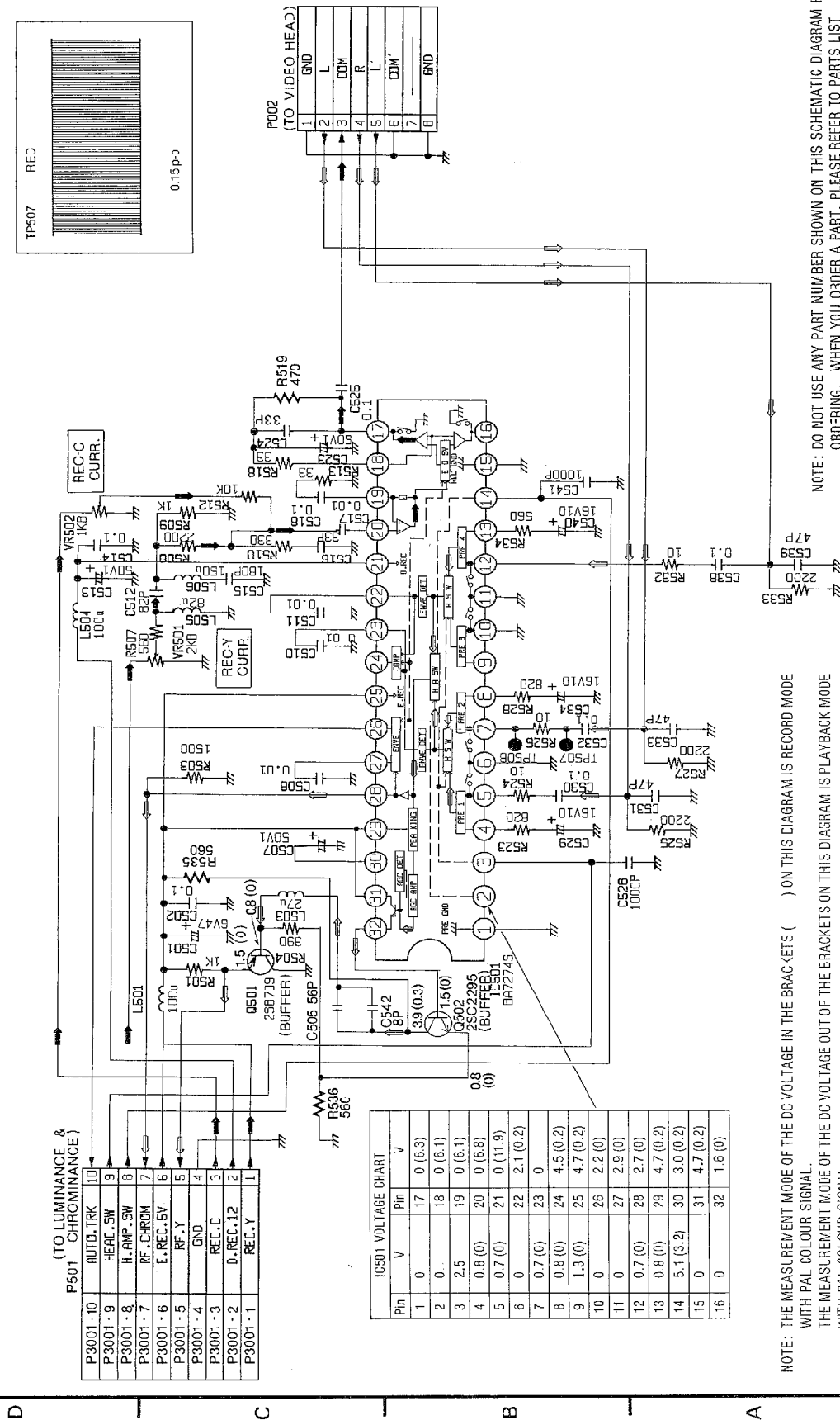
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON "HIS DIAGRAM IS STOP MODE."

3-13 HEAD AMP SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

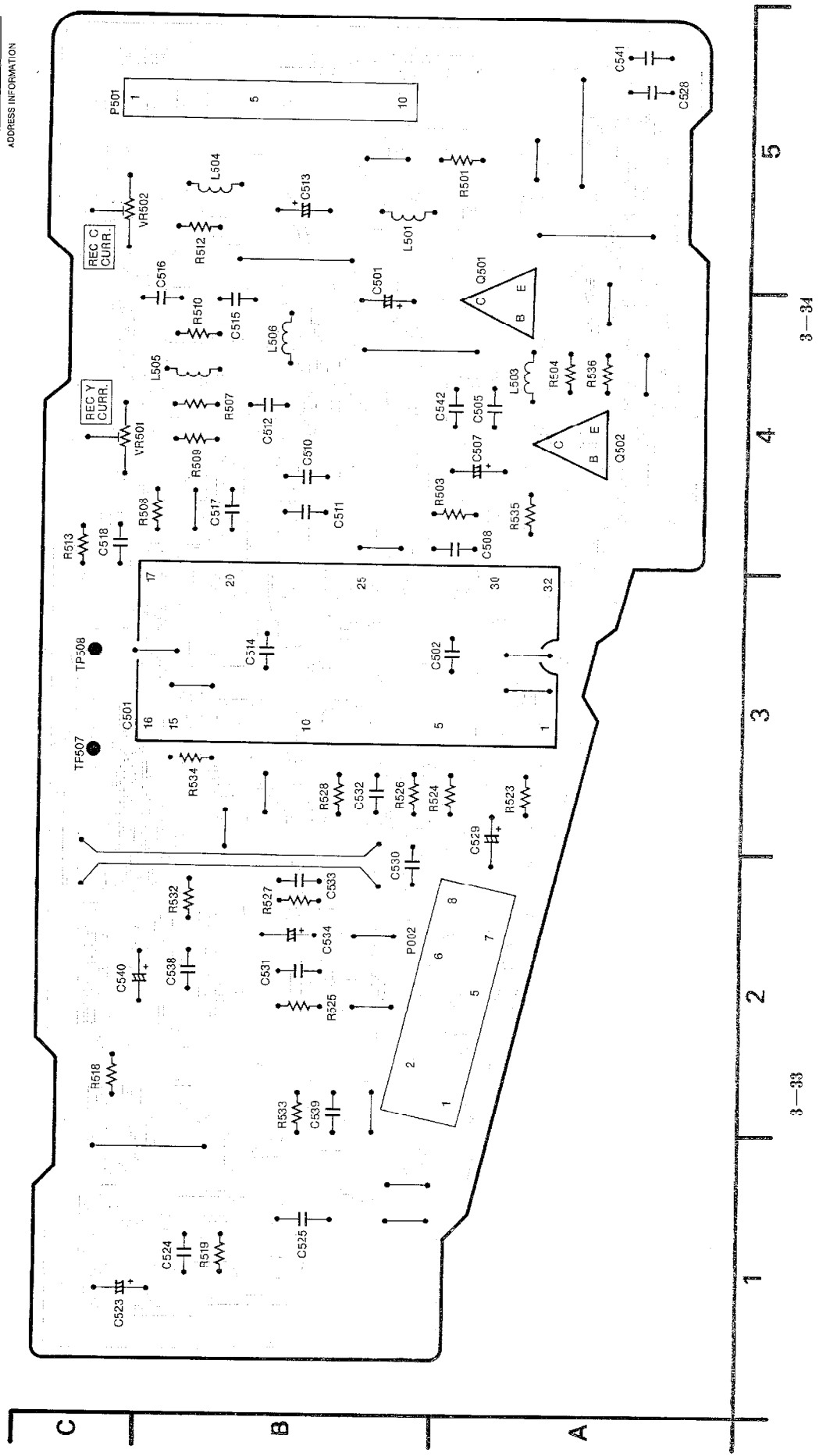
MAIN SIGNAL PATH IN PLAYBACK MODE



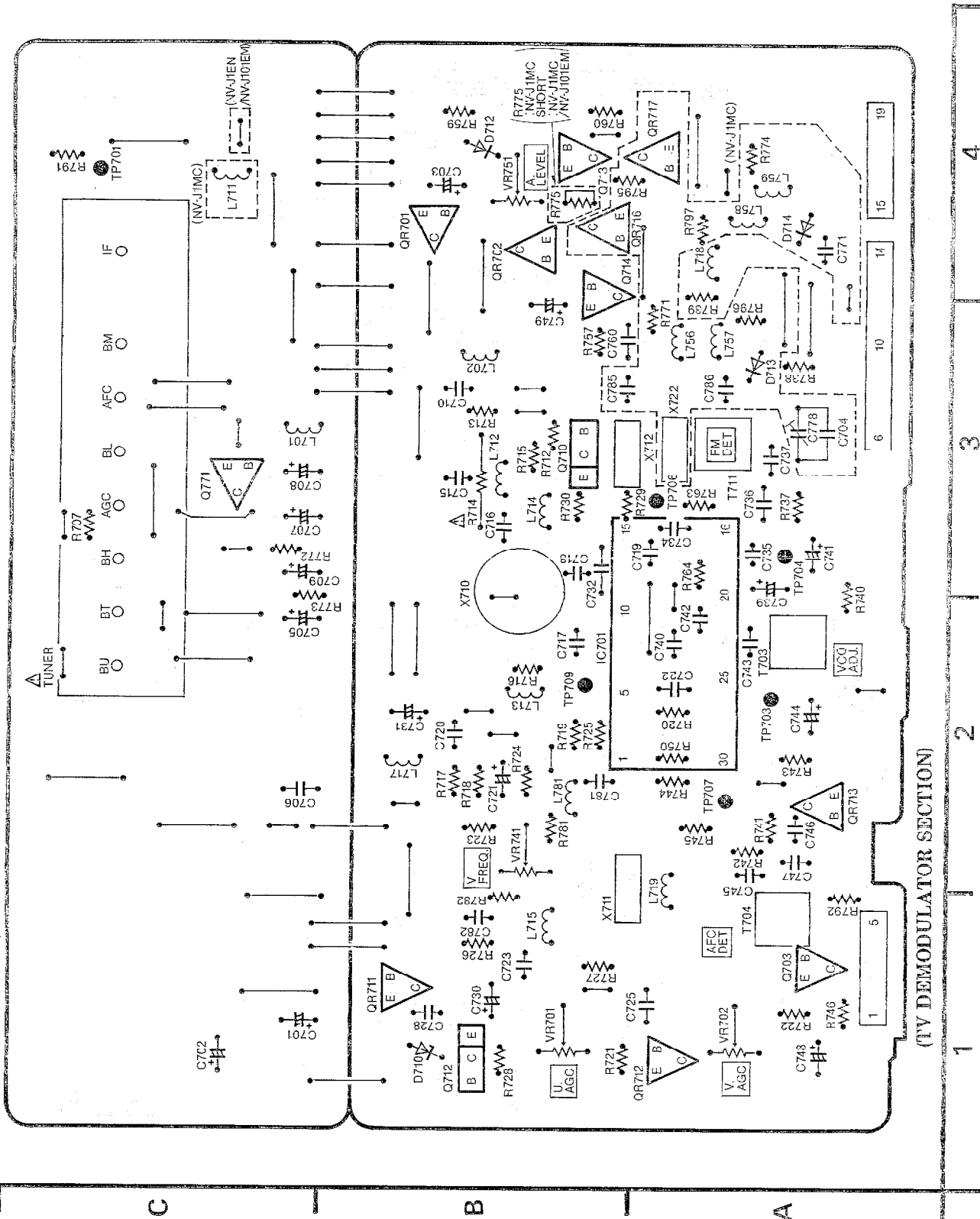
3-14 HEAD AMP C.B.A. (VEP05137B)

HEAD AMP C.B.A.	
Transistor	
Q501	A-5
Q502	A-4
Integrated Circuit	
IC501	C-3
Test Point	
TP507	C-3
TP508	C-3
Adjustment	
VR501	C-4
VR502	C-5
Connector	
P002	B-2
P501	C-5

ADDRESS INFORMATION



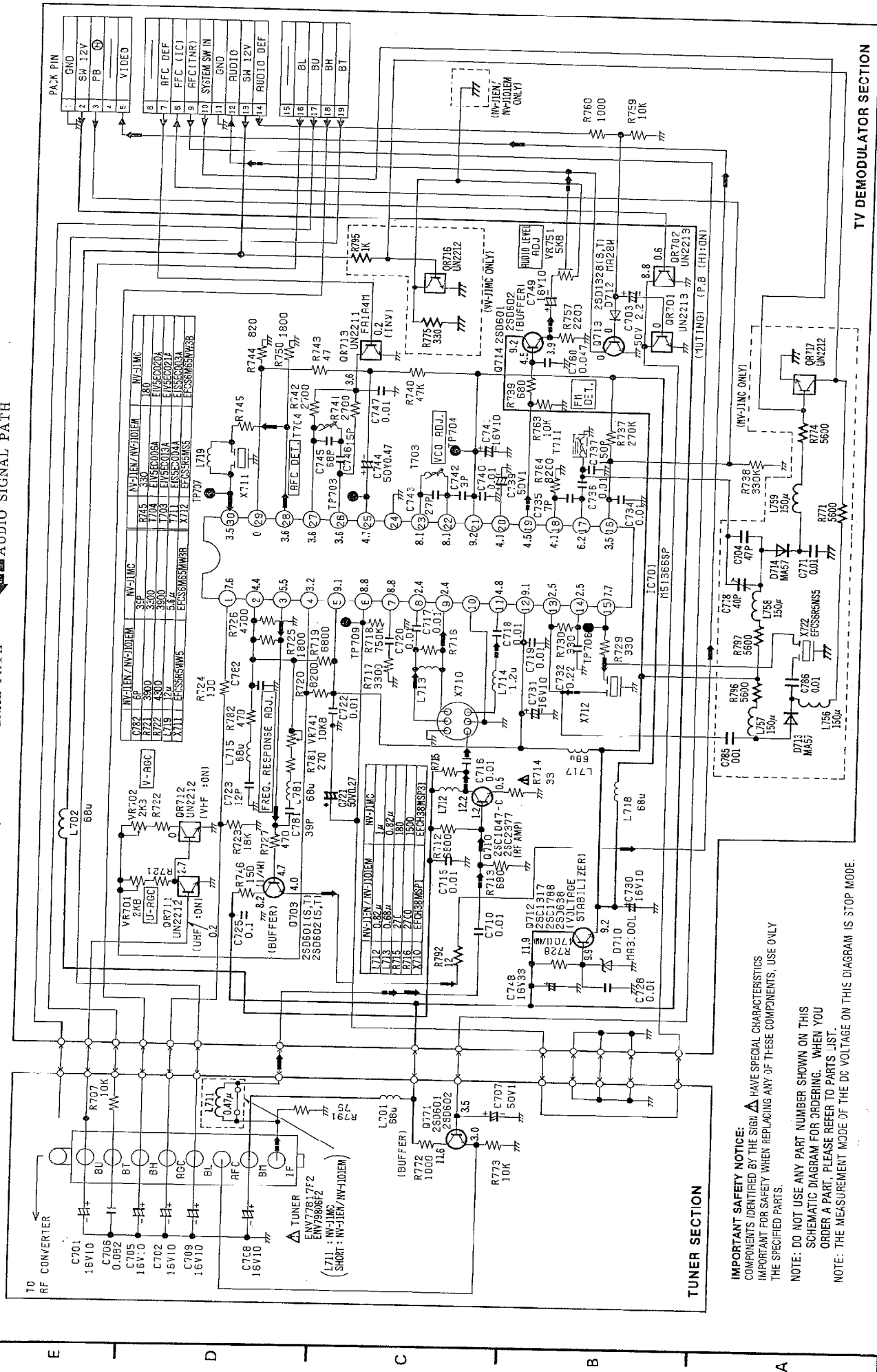
3-15. TV DEMODULATOR PACK C.B.A (VEP07444A: NV-J1EN/NV-J101EM) (VEP07444G: NV-J1MC)
(TUNER SECTION)



3-16 TV DEMODULATOR PACK SCHEMATIC DIAGRAM

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

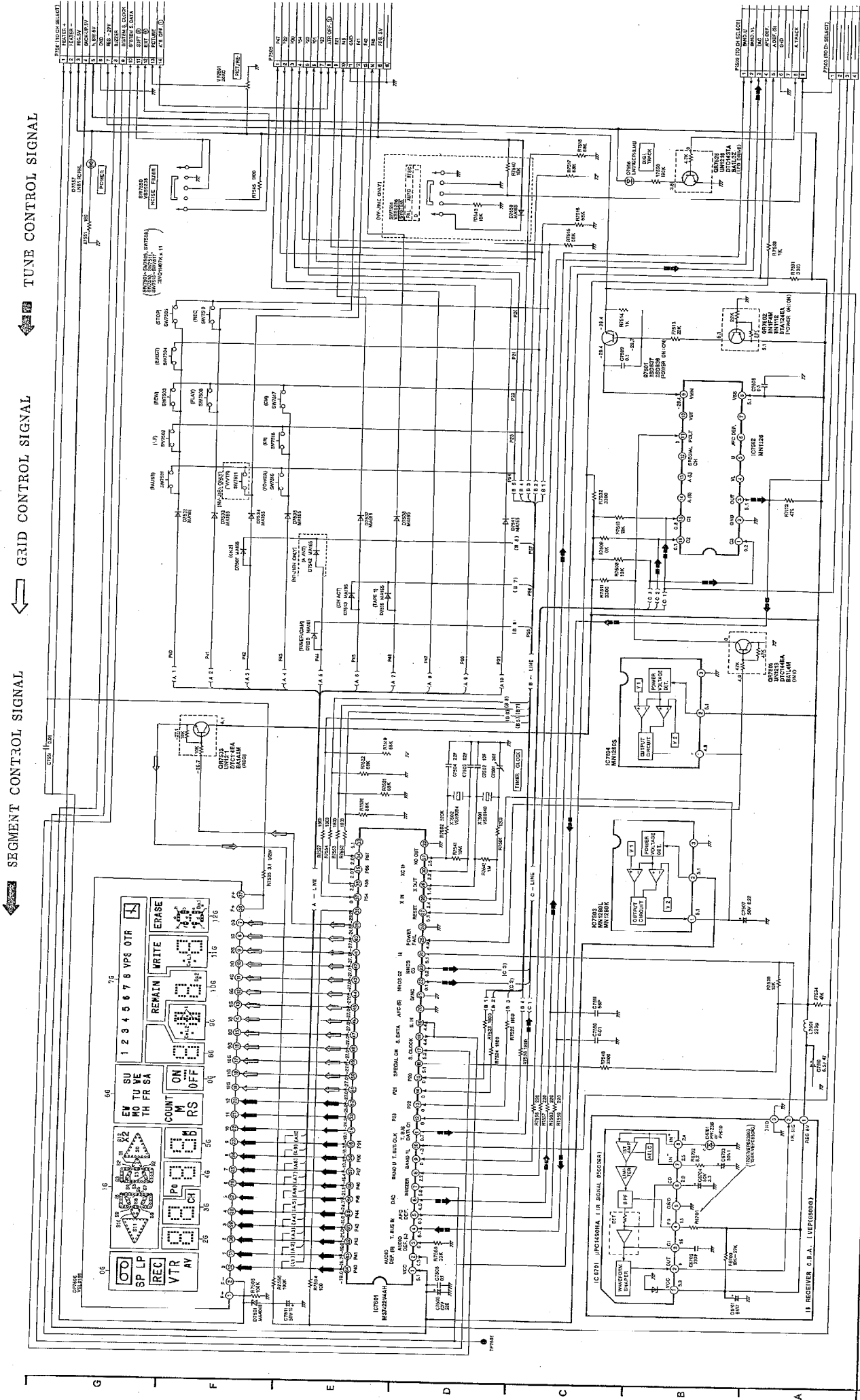


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN HAVE SPECIAL CHARACTERISTICS
IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY
THE SPECIFIED PARTS.

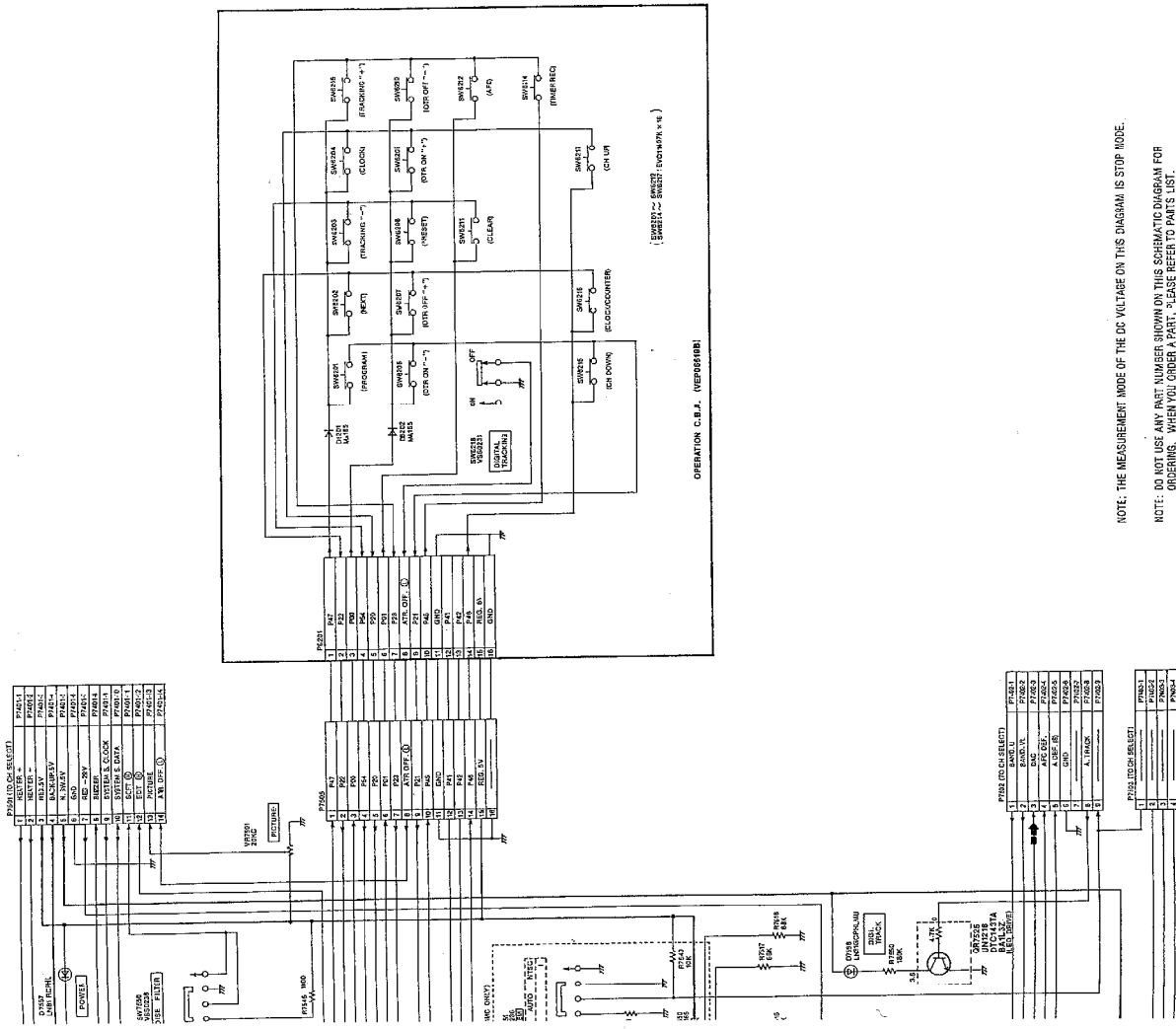
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS
SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU
ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MADE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3-17. TIMER & OPERATION SCHEMATIC DIAGRAM



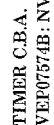
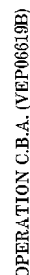
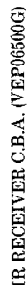
ROL SIGNAL

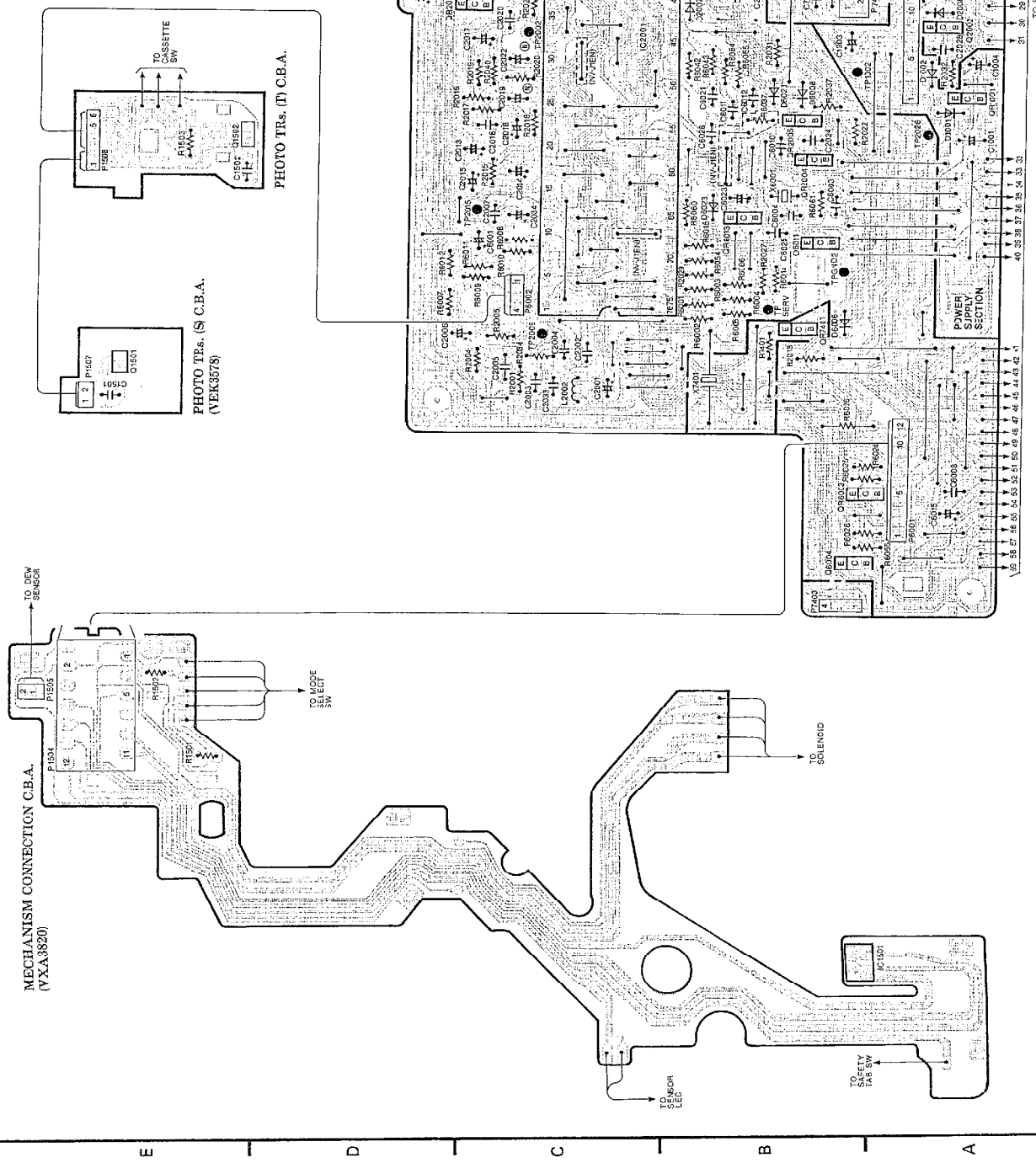


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

2
3-43





MAIN CBA Section

SYSTEM CONTROL & SERVO Section	
Transistor	
Q1531	E-4
Q1532	E-6
Q2002	A-6
Q3003	A-10
Q3005	B-3
Q3007	B-9
Q3008	B-9
Transistor & Resistor	
CR3004	B-9
Test Point	
TP3001	B-7
TP3002	C-10
Adjustment	
VR3012	B-8
Connector	
P3001	B-8
ADDRESS INFORMATION	

AUDIO Section	
Test Point	
TP4001	B-10
TP4002	C-8
TP4003	C-8
Adjustment	
VR4001	B-8
VR4002	C-8
Connector	
P4001	C-8
ADDRESS INFORMATION	

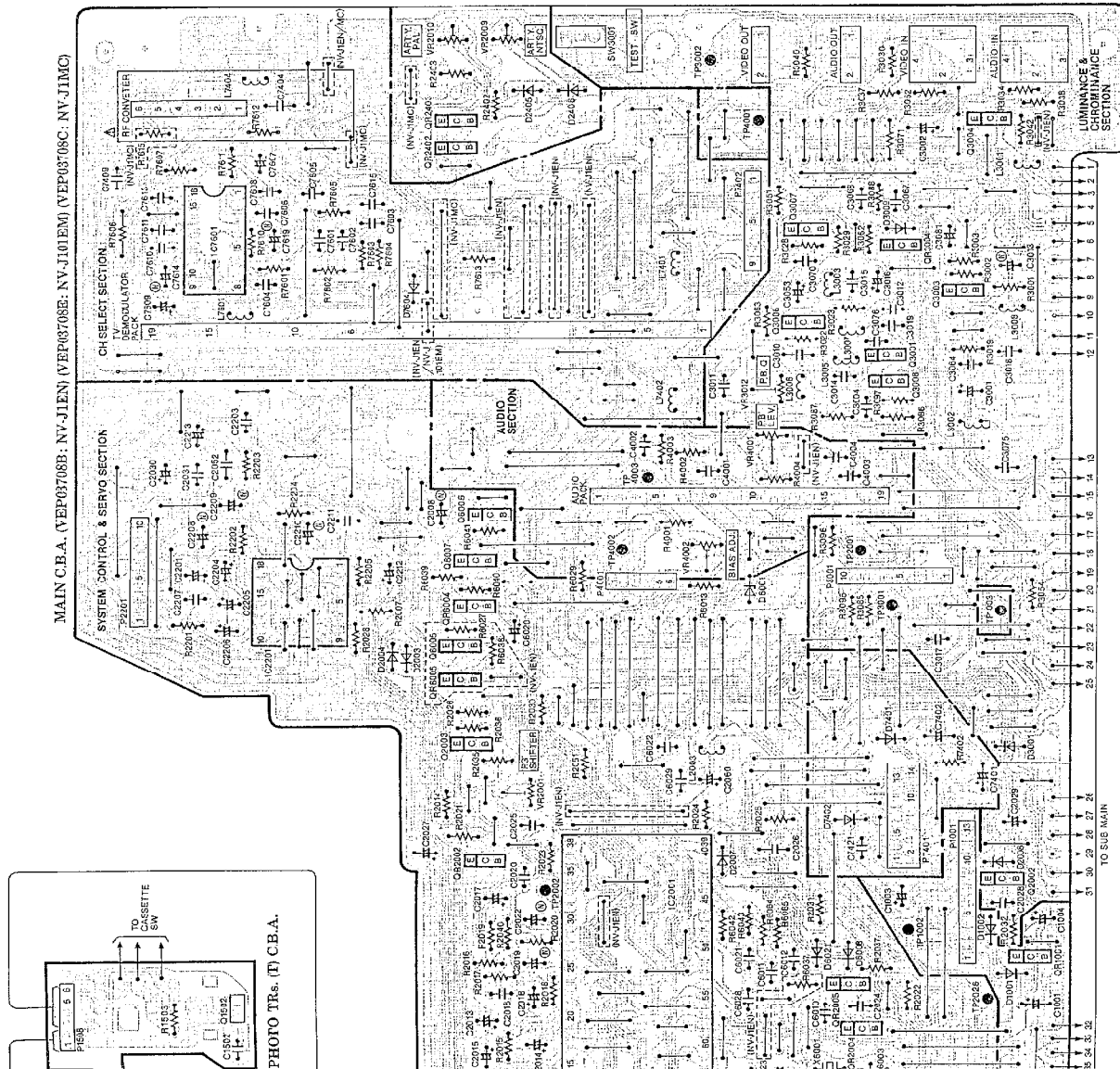
CHANNEL SELECT Section	
Transistor & Resistor	
CR7431	B-5
Integrated Circuit	
IC7601	E-9
Connector	
P7401	B-6
P7402	B-6
P7403	B-3
ADDRESS INFORMATION	

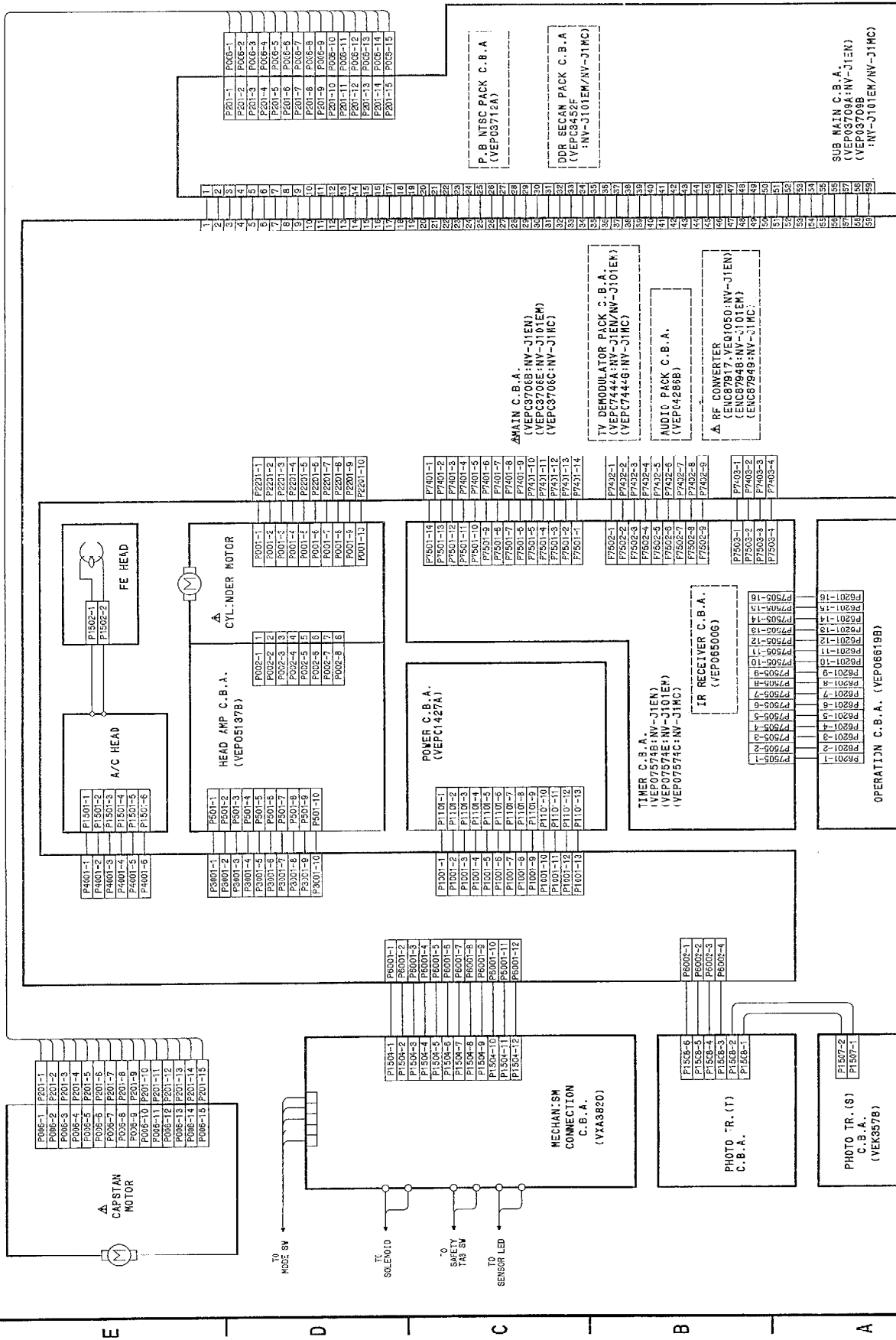
POWER Section	
Transistor & Resistor	
CR1001	A-5
Test Point	
TP1002	B-5
TP1003	A-7
Connector	
P1001	A-6
ADDRESS INFORMATION	

LUMINANCE & CHROMINANCE Section	
Transistor	
Q1501	A-1
Q2001	C-8
Q2002	D-7
Test Point	
TP2001	B-8
TP2002	C-6
TP2003	C-5
TP2004	C-5
TP2005	A-6
TP2006	B-5
TP2007	B-5
Adjustment	
VR2001	C-7
VR2002	D-10
VR2003	D-10
Connector	
P1504	E-2
P1505	E-3
P1506	E-4
P1507	E-5
P1508	E-5
P2001	E-7
P6001	A-4
P6002	C-5
ADDRESS INFORMATION	

LUMINANCE & CHROMINANCE Section	
Transistor & Resistor	
CR1001	A-5
Test Point	
TP1002	B-5
TP1003	A-7
Connector	
P1001	A-6
ADDRESS INFORMATION	

Next Page:
REMOTE CONTROLLER &
RF CONVERTER Section





IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-2. MECHANICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VHD0141	HEAD AMP SET SCREW	2	
2(1)	VMA6997	HEAD AMP MOUNT ANGLE (L)	1	
3(1)	VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
4(1)	VEK3185	DEW DETECTOR UNIT	1	
5(1)	VXS0082	EARTH PLATE UNIT	1	
6(1)	VEO0758	CYLINDER UNIT	1 (!)	
7(1)	VEH0416	UPPER CYLINDER UNIT	1 (!)	
8(1)	VJR0082	RT TERMINAL	1	
10(1)	VHD0425	UPPER CYLINDER SET SCREW	2	
11(1)	VXL1495	TENSION ARM (1) UNIT	1	
12(1)	VMB1563	TENSION SPRING	1	
13(1)	VXZ0267	TENSION BAND UNIT	1	
14(1)	VXR0185	SUPPLY REEL TABLE UNIT	1	
15(1)	VWX1171	REEL WASHER (0.5mm)	2	
15(1)	VWX1239	REEL WASHER (0.3mm)	2	
15(1)	VWX1238	REEL WASHER (0.2mm)	2	
16(1)	VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)	VBS0038	FE HEAD	1	
18(1)	VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)	VMA6895	MOUNT ANGLE (L)	1	
20(1)	VWX1079	CUT WASHER	2	
21(1)	VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)	VMB1582	TENSION RELEASE SPRING	1	
23(1)	VES0489	SAFETY SW	1	
24(1)	VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)	VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)	VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)	VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
28(1)	VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)	VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)	VMA6896	MOUNT ANGLE (R)	1	
31(1)	VHD0322	ADJUST SCREW	1	
32(1)	VMB1251	ADJUST SPRING	1	
33(1)	VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)	VBRO132	A/C HEAD	1	
35(1)	VHNO063	M4 NYLON NUT	1	
36(1)	VHNO110	ADJUST NUT	1	
37(1)	VMA7831	HEAD BASE	1	
38(1)	VMB1567	A/C HEAD SPRING	1	
39(1)	VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)	VMB1566	SUB POST SPRING	1	
41(1)	VXQ0006	THRUST SCREW UNIT	1	
42(1)	VHD0317	HOUSING SCREW	2	
43(1)	VWX1033	OIL SEAL	2	
44(1)	VWX1353	PINCH CAM CAP	1	
45(1)	VXL1858	PRESSURE ROLLER UNIT	1	
46(1)	VMB1941	PIN PRESSURE SPRING	1	
47(1)	VML2232	PINCH PRESSURE ARM	1	
48(1)	VMB1569	PINCH PRESSURE ARM RELEASE SPRING	1	
49(1)	VML1874	PINCH LIFT ARM	1	
50(1)	VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)	VDG0421	PINCH CAM	1	
52(1)	VHNO023	M3 NYLON NUT	1	
53(1)	VXL1485	P5 UNIT	1	
54(1)	VMB1554	P5 SPRING	1	
55(1)	VSS0175	MODE SW	1	
57(1)	VXP0863	ROLLER POST UNIT	1	
58(1)	VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)	VHD0133	ROLLER POST SCREW	2	
60(1)	VMD0910	POST STOPPER	2	
61(1)	VXP0764A	ROLLER POST UNIT	1	
62(1)	VXA3676	INCLIND BASE(T)(1)UNIT	1	
63(1)	VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)	VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)	VDG0332	CONNECTION GEAR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
66(1)	VXA3735	SOLENOID UNIT	1	
67(1)	VXA2692	KICK ROD UNIT	1	
68(1)	VML1849	SOLENOID LEVER (1) UNIT	1	
69(1)	VMB1553	KICK ROD SPRING	1	
70(1)	VMB1958	MAIN BRAKE SPRING	1	
71(1)	VXR0188	TAKE UP REEL TABLE UNIT	1	
72(1)	VXJO101	HOUSING UNIT	1	
76(1)	VHD0374	HOUSING SCREW	1	
77(1)	VHD0342	CYLINDER SCREW	3	
80(1)	VXA3520	LED HOLDER UNIT	1	
81(1)	VMA7044	REINFORCEMENT PLATE (F)	1	
82(1)	VMA7845	REINFORCEMENT PLATE (R)	1	
83(1)	VMB1733	LEAF SPRING	1	
84(1)	VWX1088	SUPPLY UPPER LIMITER	1	
85(1)	VDP1072	SUPPLY ROLLER	1	
86(1)	VWX1581	P1 COLLAR	1	
87(1)	VWX1533	SUPPLY ROLLER LIMITER	1	
88(1)	VWX1544	P4 UPPER LIMITER	1	
89(1)	VWX1568	P4 SLEEVE	1	
90(1)	VWX1534	P4 LOWER LIMITER	1	
100(2)	VWX1079	CUT WASHER	6	
101(2)	VMB1583	TAKE UP SOFT BRAKE RELEASE ARM SPRING	1	
102(2)	VMB1560	MAIN LEVER SPRING	1	
103(2)	VXA3509	MAIN LEVER (1) UNIT	1	
104(2)	VMM0215	SUB LEVER	1	
105(2)	VXL1873	SS BRAKE ARM UNIT	1	
106(2)	VMB1588	SS BRAKE SPRING	1	
107(2)	VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)	VXA3516	TENSION ROLLER UNIT	1	
109(2)	VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)	VML1861	DETENT ARM	1	
111(2)	VDG0574	MAIN CAM GEAR	1	
112(2)	VDG0343	SUB CAM GEAR	1	
113(2)	VDG0348	CENTRE GEAR	1	
114(2)	VDG0422	RETAINER GEAR	1	
115(2)	VDG0345	PLANET GEAR	3	
116(2)	VDG0547	CLUTCH DISK	1	
117(2)	VMB1558	CLUTCH SPRING	1	
118(2)	VDG0350	LOCK SLIDE GEAR	1	
119(2)	VDG0335	DRIVE DISK	1	
120(2)	VDG0342	RING GEAR	1	
121(2)	VMM0967	CUT WASHER	2	
122(2)	VML1859	CHANGE LEVER	1	
123(2)	VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)	VMB1557	RELEASE SPRING	1	
125(2)	VML1860	RELEASE LEVER	1	
127(2)	VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)	VDG0445	SUPPLY REEL GEAR	1	
129(2)	VML1858	RETURN LEVER (R)	1	
130(2)	VML1857	RETURN LEVER (L)	1	
131(2)	VMD0913	STOPPER BASE	1	
132(2)	VDV0169	TIMING BELT	1	
133(2)	VXP1113	ROTOR UNIT	1	
134(2)	VMA7941	ROTOR STOPPER	1	
135(2)	VEK4105	STATOR UNIT	1 (!)	
136(2)	VMA6847	SUB PLATE	1	
137(2)	VXP0917	CENTRE PULLEY UNIT	1	
138(2)	VDG0564	LOADING GEAR (T)	1	
139(2)	VMB1555	LOADING SPRING (T)	1	
140(2)	VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)	VXA3515	SECTOR GEAR UNIT	1	
142(2)	VDG0448	LOADING CAM GEAR	1	
143(2)	VDG0419	LOADING GEAR (S)	1	
144(2)	VML1855	PLAY CONTROL ARM	1	
145(2)	VXL1487	LOADING ARM (S)(1) UNIT	1	
145(2)	VDG0546	INTERMEDIATE GEAR	1	
147(2)	VXL1861	PLAY ARM UNIT	1	
149(2)	VBK0048	FG HEAD	1	
149(2)	VMB1746	LOADING SPRING(S)	1	
161(2)	VHD0431	STATOR SPACER SCREW	1	
162(2)	VHNO102	STATOR NUT	1	
201(3)	VMA7223	TOP PLATE	1	
202(3)	VXA3832	CASSETTE HOLDER UNIT	1	
216(3)	VXA2576	SIDE PLATE (L) UNIT	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
217(3)	WMD0917	SIDE PLATE (L)	1						
218(3)	WML1880	OPENER LEVER	1						
219(3)	VXA3895	SIDE PLATE (R) UNIT	1						
221(3)	VXA642	SLIDE SW UNIT	1						
229(3)	VXP0987	MAIN SHAFT UNIT	1						
230(3)	VMB1836	SUB WIPER SPRING (L)	1						
231(3)	VML1878	SUB WIPER ARM (L)	1						
232(3)	VML1879	SUB WIPER ARM (R)	1						
233(3)	VMB1837	SUB WIPER SPRING (R)	1						
234(3)	VMA6900	CASSETTE GUIDE	1						
235(3)	VKF1076	BLINDER PANEL	1						
236(3)	VMB1258	BLINDER SPRING	1						
240(3)	VMA7224	CASSETTE HOLDER ANGLE	1						
300(4)	VXP2180	TOP PANEL UNIT	1	(NV-J1EN/MC)					
300(4)	VXP2380	TOP PANEL UNIT	1	(NV-J101EM)					
301(4)	VHD0304	TOP PANEL SCREW	2						
302(4)	VKUD325	BOTTOM PLATE	1						
303(4)	VXP2180	FRONT PANEL UNIT	1	(NV-J1EN)					
303(4)	VYP3015	FRONT PANEL UNIT	1	(NV-J1MC)					
303(4)	VYP3014	FRONT PANEL UNIT	1	(NV-J101EM)					
304(4)	VGK1881	DECORATION BUTTON	1						
305(4)	VVF1489	FRONT DOOR UNIT	1	(NV-J1EN/MC)					
305(4)	VVF1485	FRONT DOOR UNIT	1	(NV-J101EM)					
307(4)	VQO0550	DOOR LOCK PIECE	2						
311(4)	VHDC059	BOTTOM PLATE SCREW	4						
313(4)	VXA3635	POWER SHIELD CASE(MAIN)UNIT	1						
314(4)	VSC3110	POWER SHIELD COVER (TOP)	1						
315(4)	VGH1476	NAME PLATE	1						
316(4)	VQO2036	IC. HOLDER	1						
317(4)	WN21575	INSULATION SHEET	1						
318(4)	WN21140	SW BARRIER(A)	1						
319(4)	VSC2237	POWER SHIELD COVER(BOTTOM)	1						
320(4)	VKCO326	MAIN HINGE	2						
322(4)	VNP2455	TOP HOLDER ANGLE (RR)	1						
323(4)	VNP2456	TOP HOLDER ANGLE (RL)	1						
329(4)	VWJ0413	FLEXIBLE CABLE (14PIN)	1	(P7401-P7501)					
330(4)	VJPO374	CORNER HINGE	1						
331(4)	VHD0141	MAIN SCREW	1						
400(5)	VQT3438	OPERATING INSTRUCTIONS	1	() (NV-J101EM)					
		(ENGLISH/CHINESE)		J.E.V					
400(5)	VQT3439	OPERATING INSTRUCTIONS	1	() (NV-J1EN)					
		(HINDI/URDU)							
400(5)	VQT3443	OPERATING INSTRUCTIONS	1	() (NV-J1MC)					
		(ENGLISH/CHINESE)							
400(5)	VQT3440	OPERATING INSTRUCTIONS	1	() (NV-J101EM)					
		(ENGLISH/ARABIC)							
400(5)	VQT3441	OPERATING INSTRUCTIONS	1	() (NV-J101EM)					
		(HINDI/URDU)							
401(5)	VPK0825	ACCESSORIES BOX	1						
402(5)	VEQ1044	REMOTE CONTROL UNIT	1	(NV-J1EN)					
402(5)	VEQ1086	REMOTE CONTROL UNIT	1	(NV-J101EM/MC)					
403(5)	VJAO449	AC POWER CORD	1	() (NV-J1EN)					
403(5)	VJAO457	AC POWER CORD	1	(NV-J1MC)					
403(5)	VJAO459	AC POWER CORD	1	() (NV-J101EM)					
404(5)	VJAO376	DIN RT CABLE	1						
406(5)	VPN2624	CUSHION (R)	1	(NV-J1EN)					
406(5)	VPN2626	CUSHION (R)	1	(NV-J101EM/MC)					
407(5)	VPN2625	CUSHION (L)	1	(NV-J1EN)					
407(5)	VPN2627	CUSHION (L)	1	(NV-J101EM/MC)					
408(5)	VPG5250	PACKING	1	(NV-J1EN)					
408(5)	VPG5018	PACKING	1	(NV-J101EM)					
402	VPG5020	PACKING	1	(NV-J1MC)					
409(5)	VSO0662	SEPARATION ADAPTOR	1	(NV-J1EN/MC)					
410(5)	VPO0001	HANDLE	1						
411(5)	VJS1993	AC PLUG ADAPTOR	1	(NV-J101EM/J1MC)					
412(5)	VFA0021	SPATCHING ADAPTOR	1	(NV-J1MC)					
450(6)	VYK2760	TOP COVER UNIT	1						
450(6)	VYK2944	TOP COVER UNIT	1	(NV-J101EM)					
451(6)	VGM1313	BOTTOM COVER	1						
452(6)	VKF0958	BATTERY COVER	1						
453(6)	VKM0878	IR WINDOW	1						
454(6)	VSP0311	RUBBER CONTACT	1	(NV-J1EN)					
454(6)	VSP0334	RUBBER CONTACT	1	(NV-J101EM)					
455(6)	VJRO185	ELECTRODE (CCM.)	1						

4-3 ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. * Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.
 3. Unless otherwise specified, All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
 4. The P.C. Board units marked with "■" show below the main assembled parts.

Ref.No.	Part No.	Part Name & Description	PCS	Remarks
	VEPO3708B	MAIN C.B.A. (SYSTEM CONTROL, SERVO, LUMINANCE & CHROMINANCE, AUDIO, POWER, CH SELECT, TUNER, TV DEMODULATOR)	1	NV-J1EN (NLA) (!) INCLUDING THE SUB MAIN C.B.A. (VEPO3709A), PLAYBACK NTSC PACK C.B.A. (VEPO3712A), AUDIO PACK C.B.A. (VEPO4206B), TV DEMODULATOR PACK C.B.A. (VEPO7444A).
	VEPO3708E	MAIN C.B.A. (SYSTEM CONTROL, SERVO, LUMINANCE & CHROMINANCE, AUDIO, POWER, CH SELECT, TUNER, TV DEMODULATOR)	1	NV-J1MC (NLA) (!) INCLUDING THE SUB MAIN C.B.A. (VEPO3709B), INCLUDING THE DDR SECAM PACK C.B.A. (VEPO3452F), PLAYBACK NTSC PACK C.B.A. (VEPO3712A), AUDIO PACK C.B.A. (VEPO4286B), TV DEMODULATOR PACK C.B.A. (VEPO7444G).
	VEPO3708C	MAIN C.B.A. (SYSTEM CONTROL, SERVO, LUMINANCE & CHROMINANCE, AUDIO, POWER, CH SELECT, TUNER, TV DEMODULATOR)	1	NV-J101EM (NLA) (!) INCLUDING THE SUB MAIN C.B.A. (VEPO3709B), INCLUDING THE DDR SECAM PACK C.B.A. (VEPO3452F), PLAYBACK NTSC PACK C.B.A. (VEPO3712A), AUDIO PACK C.B.A. (VEPO4286B), TV DEMODULATOR PACK C.B.A. (VEPO7444A).
	VEPO3709A	SUB MAIN C.B.A.	1	NV-J1EN (NLA) INCLUDED IN MAIN C.B.A. (VEPO3708B).
	VEPO3709B	SUB MAIN C.B.A.	1	NV-J1MC, J101EM (NLA) INCLUDED IN MAIN C.B.A. (VEPO3708C/E).
	VEPO3452F	DDR SECAM PACK C.B.A.	1	NV-J1MC, J101EM (NLA) INCLUDED IN SUB MAIN C.B.A. (VEPO3709B).
	VEPO3712A	PLAYBACK NTSC C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEPO3708B/C/E).

Ref.No.	Part No.	Part Name & Description	PCS	Remarks
	VEPO4286B	AUDIO PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEPO3708B/C/E).
	VEPO7444A	TV DEMODULATOR PACK C.B.A.	1	NV-J1EN/MC (NLA) INCLUDED IN MAIN C.B.A. (VEPO3708B/C).
	VEPO7444G	TV DEMODULATOR PACK C.B.A.	1	NV-J101EM (NLA) INCLUDED IN MAIN C.B.A. (VEPO3708E).
	VEPO5137B	HEAD AMP C.B.A.	1	(NLA)
	VEPO7574B	TIMER C.B.A.	1	NV-J1EN (NLA)
	VEPO7574C	TIMER C.B.A.	1	NV-J1MC
	VEPO7574E	TIMER C.B.A.	1	NV-J101EM INCLUDING THE IR RECEIVER C.B.A. (VEPO6360G).
	VEPO6380G	IR RECEIVER C.B.A.	1	(NLA) INCLUDED IN TIMER C.B.A. (VEPO7574B/C/E).
	VEPO6619D	OPERATION C.B.A.	1	(NLA)
	VEPO1427A	POWER C.B.A.	1	(NLA) (!)
	VEP66042C	REMOTE CONTROL UNIT C.B.A.	1	(NLA)
	VXA3820	MECHANISM CONNECTION C.B.A.	1	(NLA)
	VEK3578	SUPPLY PHOTO Tr. C.B.A.	1	(NLA)
		TAKE-UP PHOTO Tr. C.B.A.	1	
	ENC87917	RF CONVERTER	1	(!) OR VEQ1050 NV-J1EN
	ENC87949	RF CONVERTER	1	NV-J1MC
	ENC87948	RF CONVERTER	1	NV-J101EM
	ENV87945	TUNER	1	(!) OR VSQ0612 NV-J1EN, NV-J101EM
	ENV79806F2	TUNER	1	NV-J1MC
F1101	XBA2C16TDO	FUSE 250V 6A	1	(!)
	■ VEPO3708B	MAIN C.B.A.		(NLA)
	■ VEPO3708C	MAIN C.B.A.		NV-J1EN
	■ VEPO3708E	MAIN C.B.A.		NV-J1MC NV-J101EM

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		CAPACITORS			C426	VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C201-03	ECQB1H333JH	P.CAPACITOR 50V 0.033U	3		C502	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C204-05	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3		C605	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C207,08	VCYD1E333KR	S.CAPACITOR 25V 0.033U	2		C606	ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C209	ECEA1CKN100	E.CAPACITOR 16V 10U	1		C607	VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C210	ECEA1HGR47	E.CAPACITOR 50V 0.47U	1		C613	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	
C211	ECEA1CK101	E.CAPACITOR 16V 100U	1		C614	ECEA1CK220	E.CAPACITOR 16V 22U	1	
C212	ECQB1H562KH	P.CAPACITOR 50V 5600P	1		C701,02	ECEA1CK100	E.CAPACITOR 16V 10U	2	
C213	VCYD1E473KR	S.CAPACITOR 25V 0.047U	1		C703	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C215	ECEA1CK470	E.CAPACITOR 16V 47U	1		C705	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C216	ECEA1EU221	E.CAPACITOR 25V 220U	1		C706	ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C218	VCYD1E333KR	S.CAPACITOR 25V 0.033U	1		C707	ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C301	ECEA1EK47R	E.CAPACITOR 25V 2.2U	1		C708,09	ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C302	ECEA0JK220	E.CAPACITOR 6.3V 22U	1		C710	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C303	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C715-20	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	6	
C304	ECEA0JU331	E.CAPACITOR 6.3V 330U	1		C721	ECEA1HGR27K	E.CAPACITOR 50V 0.27U	1	
C305	ECEA1CK100	E.CAPACITOR 16V 10U	1		C722	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C306	ECEA1EK47R	E.CAPACITOR 25V 4.7U	1		C723	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C307	ECCL1H470JC	C.CAPACITOR 50V 47P	1		C725	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C308	ECCL1H220JC	C.CAPACITOR 50V 22P	1		C728	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C310	ECEA1CK100	E.CAPACITOR 16V 10U	1		C730	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311,12	ECCL1H180JC	C.CAPACITOR 50V 18P	2		C731	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C313	ECEA1CK100	E.CAPACITOR 16V 10U	1		C732	ECQV1H22480	P.CAPACITOR 50V 0.22U	1	
C314	ECCL1H121JC	C.CAPACITOR 50V 120P	1		C734	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C315	ECCL1H560JC	C.CAPACITOR 50V 56P	1		C735	ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C317	ECEA1AK470	E.CAPACITOR 10V 47U	1		C736	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C319	ECKF1H471KB	C.CAPACITOR 50V 470P	1		C737	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C320	ECCL1H270JC	C.CAPACITOR 50V 27P	1		C739	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C321	ECEA1HK010	E.CAPACITOR 50V 1U	1		C740	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C322	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1		C741	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C324	ECEA1CK100	E.CAPACITOR 16V 10U	1		C742	ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C325,26	ECKF1H1032F	C.CAPACITOR 50V 0.01U	2		C743	ECUM1H270RSN	C.CAPACITOR CH 50V 27P	1	
C327,28	ECEA1CK100	E.CAPACITOR 16V 10U	2		C744	ECEA1HGR47	E.CAPACITOR 50V 0.47U	1	
C329	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1		C745	ECUX1H680JFN	C.CAPACITOR CH 50V 68P	1	
C331	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1		C746	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C332	ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1		C747	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C333	ECEA1HK47R	E.CAPACITOR 50V 4.7U	1		C748	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C334	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1		C749	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C335	ECCL1H680JC	C.CAPACITOR 50V 68P	1		C760	ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C336	ECCL1H01JC	C.CAPACITOR 50V 100P	1		C771	ECUV1H1032FN	C.CAPACITOR CH 50V 0.01U	1	NV-J1MC
C337	ECCL1H270JC	C.CAPACITOR 50V 27P	1		C778	ECV1Z40X53	CAPACITOR	1	NV-J1MC
C338	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C781	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C339	ECCL1H220JC	C.CAPACITOR 50V 22P	1		C782	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	NV-J1MC
C340	ECEA1EK47R	E.CAPACITOR 25V 4.7U	1		C782	ECUM1H050DCN	C.CAPACITOR CH 50V 6P	1	NV-J1EN, NV-J101EN
C349	ECCL1H470JC	C.CAPACITOR 50V 47P	1		C785,86	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	NV-J1MC
C351	ECCL1H220JC	C.CAPACITOR 50V 22P	1		C814	ECEA1AK101	E.CAPACITOR 10V 100U	1	
C352	ECQB1H562KH	P.CAPACITOR 50V 5600P	1		C815	ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C353	ECCL1H560JC	C.CAPACITOR 50V 56P	1		C816	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C354	ECEA1CK100	E.CAPACITOR 16V 10U	1		C817	ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C350	ECQB1H153KH	P.CAPACITOR 50V 0.015U	1		C818	ECKF1H391KB	C.CAPACITOR 50V 390P	1	
C361	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C819	ECCL1H620JC	C.CAPACITOR 50V 62P	1	
C401	ECQB1H153JH	P.CAPACITOR 50V 0.015U	1		C820	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C403	ECEA1GN33	E.CAPACITOR 16V 33U	1		C821	ECEA1HFS47R	E.CAPACITOR 50V 4.7U	1	
C403	ECKF1H102KB	C.CAPACITOR 50V 1000P	1		C823	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C404	ECQP1332JZ	P.CAPACITOR 100V 3300P	1		C824	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C405	ECCL2H121J	C.CAPACITOR 500V 120P	1		C825	ECCL1H101JC	C.CAPACITOR 50V 100P	1	
C406	ECEA1CK470	E.CAPACITOR 16V 47U	1		C826	ECEA1AU221	E.CAPACITOR 10V 220U	1	
C407	ECEA1CK330	E.CAPACITOR 16V 33U	1		C827	ECCL1H050DC	C.CAPACITOR 50V 5P	1	
C408	ECEA1HK010	E.CAPACITOR 50V 1U	1		C828	ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C409	ECEA1EK47R	E.CAPACITOR 25V 4.7U	1		C829	ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C410	ECOB1H123JH	P.CAPACITOR 50V 0.012U	1		C830	ECEA1EK47R	E.CAPACITOR 25V 4.7U	1	NV-J1MC, NV-J101EN
C412	ECEA1CK100	E.CAPACITOR 16V 10U	1		C831,32	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C413	ECKF1H471KB	C.CAPACITOR 50V 470P	1		C833	ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C415	ECEA1GN10R	E.CAPACITOR 16V 1U	1		C851	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	NV-J1MC, NV-J101EN
C416	ECKF1H102KB	C.CAPACITOR 50V 1000P	1		C852	ECEA1CK330	E.CAPACITOR 16V 33U	1	NV-J1MC, NV-J101EN
C417	ECEA1GN10R	E.CAPACITOR 16V 1U	1		C853	ECEA10247	E.CAPACITOR 10V 47U	1	NV-J1MC, NV-J101EN
C418	ECQB1H123JH	P.CAPACITOR 50V 0.012U	1		C854	ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	NV-J1MC, NV-J101EN
C419	ECEA1CK100	E.CAPACITOR 16V 10U	1		C855	ECEA1CK330	E.CAPACITOR 16V 33U	1	NV-J1MC, NV-J101EN
C420	ECKF1H102KB	C.CAPACITOR 50V 1000P	1		C856	ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	NV-J1MC, NV-J101EN
C421	ECEA0JK101U	E.CAPACITOR 6.3V 100U	1		C858	ECKF1H681KB	C.CAPACITOR 50V 680P	1	NV-J1MC, NV-J101EN
C422	ECKF1H102KB	C.CAPACITOR 50V 1000P	1		C859	ECCL1H470JC	C.CAPACITOR 50V 47P	1	NV-J1MC, NV-J101EN
C423	ECCL1H221JC	C.CAPACITOR 50V 220P	1		C1001	ECEA1EK470	E.CAPACITOR 25V 47U	1	
C424,25	ECCL1H101JC	C.CAPACITOR 50V 100P	2		C1003	ECEA0JK101U	E.CAPACITOR 6.3V 100U	1	
					C1004	ECEA1CK470	E.CAPACITOR 16V 47U	1	
					C2001	ECEA0JK221	E.CAPACITOR 6.3V 220U	1	

Ref No.	Part No.	Part Name & Description	Pos	Remarks
C2002	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2003	ECQB1H472JH	P. CAPACITOR 50V 4700P	1	
C2004	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C2005	ECQV1H394JZ	P. CAPACITOR 50V 0.39U	1	
C2006	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C2007	ECKF1H472ZF	C. CAPACITOR 50V 4700P	1	
C2008	ECEA1HKNU10	E. CAPACITOR 50V 1U	1	
C2013	ECEA1HK4R7	E. CAPACITOR 50V 4.7U	1	
C2014	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C2015	ECEA0JK101U	E. CAPACITOR 6.3V 100U	1	
C2016	VCYD1E223KR	S. CAPACITOR 25V 0.022U	1	
C2017	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C2018	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2019	ECEA1HKNZR2	E. CAPACITOR 50V 2.2U	1	
C2020	VCYD1E473KR	S. CAPACITOR 25V 0.047U	1	
C2022	ECEA1HKNZR2	E. CAPACITOR 50V 2.2U	1	
C2024	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2025	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C2026	ECQV1H224JZ	P. CAPACITOR 50V 0.22U	1	
C2027	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C2028	ECQB1H333JH	P. CAPACITOR 50V 0.033U	1	
C2029	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C2030	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2031	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2033	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C2034	ECEA0JK330	E. CAPACITOR 6.3V 33U	1	
C2050	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C2052	ECQV1H184JZ	P. CAPACITOR 50V 0.18U	1	
C2201	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2203	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2204-06	ECEA1HKOR1	E. CAPACITOR 50V 0.1U	3	
C2207	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2208-10	ECEA1VKR4R7	E. CAPACITOR 35V 4.7U	3	
C2211	ECQB1H473JH	P. CAPACITOR 50V 0.047U	1	
C2212	ECEA0JK101U	E. CAPACITOR 6.3V 100U	1	
C2213	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C3001	ECFA1CK470	E. CAPACITOR 16V 47U	1	
C3002	ECEA0JU471	E. CAPACITOR 6.3V 470U	1	
C3004	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C3010	ECCF1H511JC	C. CAPACITOR 50V 150P	1	
C3011	ECCF1H330JC	C. CAPACITOR 50V 33P	1	
C3012	ECKF1H681KB	C. CAPACITOR 50V 680P	1	
C3013	ECEA1HKNO10	E. CAPACITOR 50V 1U	1	
C3014	ECCF1H330JC	C. CAPACITOR 50V 33P	1	
C3015	VCYD1E103KR	S. CAPACITOR 25V 0.01U	1	
C3016	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3017, 18	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C3019	ECCF1H220JC	C. CAPACITOR 50V 22P	1	
C3053	ECEA0JK101U	E. CAPACITOR 6.3V 100U	1	
C3064	ECQB1H103KH	P. CAPACITOR 50V 0.01U	1	
C3067, 68	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C3070	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C3075	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C3076	ECCF1H180JC	C. CAPACITOR 50V 18P	1	
C3081	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C3101	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3102	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3103, 04	ECKF1H332KB	C. CAPACITOR 50V 3300P	2	
C3105	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C3804	ECEA1AK470	E. CAPACITOR 10V 47U	1	
C3805-07	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	3	
C3808	ECKF1H332KB	C. CAPACITOR 50V 3300P	1	
C3809	ECQB1H332JH	P. CAPACITOR 50V 3300P	1	
C3810	ECEA1HKNO10	E. CAPACITOR 50V 1U	1	
C3811	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C3812	ECKF1H821KB	C. CAPACITOR 50V 820P	1	
C3813	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C3814	ECEA0JK101U	E. CAPACITOR 6.3V 100U	1	
C3815, 16	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C3817	ECCF1H470JC	C. CAPACITOR 50V 47P	1	
C3818, 19	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C3820	ECCF1H560JC	C. CAPACITOR 50V 56P	1	
C3821	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C3822	ECCF1H560JC	C. CAPACITOR 50V 56P	1	
C4001	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pos	Remarks
C4002	ECKF1H472ZF	C. CAPACITOR 50V 4700P	1	
C4003	VCYD1E153KR	S. CAPACITOR 25V 0.015U	1	
C4004	VCYD1C104MR1	S. CAPACITOR 16V 0.1U	1	
C5001	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C5003	ECCF1H180JC	C. CAPACITOR 50V 18P	1	
C5004	ECCF1H150JC	C. CAPACITOR 50V 15P	1	
C5008	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C6010	ECKF1H332KB	C. CAPACITOR 50V 3300P	1	
C6011, 12	ECKF1H271KB	C. CAPACITOR 50V 270P	2	
C6015	ECEA1CK330	E. CAPACITOR 16V 33U	1	
C6020	ECEA1CK330	E. CAPACITOR 16V 33U	1	
C6021	ECKF1H332KB	C. CAPACITOR 50V 3300P	1	
C6022	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C6023	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C6025	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C6028	ECKF1H332KB	C. CAPACITOR 50V 3300P	1	
C6029	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7401	ECEA0JU221	E. CAPACITOR 6.3V 220U	1	
C7402	EECSR5V105	TRIMMER	1	
C7404	ECKF1H223ZF	C. CAPACITOR 50V 0.022U	1	
C7409	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C7421	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7601	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C7602	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C7603	ECQV1H823JZ	P. CAPACITOR 50V 0.082U	1	
C7604	ECQV1H273JH	P. CAPACITOR 50V 0.027U	1	
C7605, 06	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C7607	ECEA1HKA100	E. CAPACITOR 50V 10U	1	
C7608	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7609	ECEA1CK330	E. CAPACITOR 16V 33U	1	
C7610, 11	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	2	
C7613	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7614	ECEA1HKNO10	E. CAPACITOR 50V 1U	1	
C7615	ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7619	ECEA1HKNO10	E. CAPACITOR 50V 1U	1	
		DIODES		
D301	MA4091M	DIODE	1	
D403	MA155	DIODE	1	
D602-04	MA155	DIODE	3	
D605	ERA15-01	DIODE	1	
D607	MA155	DIODE	1	
D609	MA150M	DIODE	1	
D710	MA3100L	DIODE	1	
D712	MA28W	DIODE	1	
D713, 14	MA57W	DIODE	2	NV-J1MC
D1001, 02	MA155	DIODE	2	
D2003, 04	MA165	DIODE	2	
D2007, 08	MA165	DIODE	2	
D2406, 06	MA165	DIODE	2	
D3001	MA165	DIODE	1	
D3009	MA165	DIODE	1	
D3101	MA165	DIODE	1	
D3102	MA27WA	DIODE	1	
D6001	MA4051	DIODE	1	
D6006	MA165	DIODE	1	
D6008	11ES1	DIODE	1	
D6021	11ES1	DIODE	1	
D6023	MA165	DIODE	1	
D7401, 02	11ES1	DIODE	2	
D7604	MA165	DIODE	1	
		DELAY		
DL802	EFD8R124A53T	DELAY	1	
DL3601	EFDVR645A45A	DELAY LINE	1	
		FUSE		
F601	VSP0077	FUSE	1	
		FILTERS		
FL301	ELB4M022	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL302	VLFO499	FILTER	1	
FL303	VLFO727	FILTER	1	
FL801	ELB4W002	FILTER	1	
FL851	VLFO143	FILTER	1	NV-J1MC, NV-J101EM
FL3101	ELB4H020	FILTER	1	
		ICS		
IC201	BA64358	IC	1	
IC301	VEFH03D	HIC	1	
IC303	PSM6965-3R5	IC	1	
IC401	BA7756AS	IC	1	
IC602	LM393P	IC	1	
IC603	MN1280R	IC	1	
IC701	M51366SP	IC	1	
IC801	VEFH04F	P.C. BOARD	1	
IC851	BA7025L	IC	1	NV-J1MC, NV-J101EM
IC2001	PM6740VCTK	IC	1	
IC2201	AN3814K	IC	1	
IC3101	BA7004	IC	1	
IC3801	M52063SP	IC	1	
IC7601	AN5043	IC	1	
		PACK PIN		
KR851	VJRO163	PACK PIN	1	NV-J1MC, NV-J101EM
		COILS		
L201	VLQEL05F102K	COIL	1000UH	1
L301	VLQEL05F101K	COIL	100UH	1
L302	VLQEL05F220K	COIL	22UH	1
L303,04	VLQEL05F101K	COIL	100UH	2
L306	VLQEL05F101K	COIL	100UH	1
L307	VLQEL05F151K	COIL	150UH	1
L308	VLQEL05F270K	COIL	27UH	1
L309,10	VLQEL05F101K	COIL	100UH	2
L311	VLQEL05F2R2K	COIL	2.2UH	1
L401	VLQEL07F822J	COIL	8200UH	1
L402	VLQEL05F471K	COIL	470UH	1
L701,02	ELESP680KA	COIL	68UH	2
L711	VLQ0305JR47T	COIL	0.47UH	1 NV-J1MC
L712	VLQ0305J1R0T	COIL	1.0UH	1 NV-J1MC
L712	VLQ0305JR62T	COIL	0.82UH	1 NV-J101EM
L713	VLQ0305JR62T	COIL	0.82UH	1 NV-J1MC
L713	VLQ0305JR68	COIL	0.68UH	1 NV-J101EM
L714	VLQ0305J1R2	COIL	1.2UH	1
L715	VLQ0213K680	COIL	68UH	1
L717,18	ELESP680KA	COIL	68UH	2
L719	VLQEL05F5R6K	COIL	5.6UH	1 NV-J1MC
L719	ELESP120KA	COIL	120UH	1 NV-J101EM
L756-59	VLQEL05F151K	COIL	150UH	4 NV-J1MC
L781	ELESP680KA	COIL	68UH	1
L804	VLQEL05F150K	COIL	15UH	1
L805	VLQEL05F101K	COIL	100UH	1
L806	VLQEL05F681K	COIL	680UH	1
L808	VLQEL05F470K	COIL	47UH	1
L809	VLQEL05F391K	COIL	390UH	1
L810	VLQEL05F101K	COIL	100UH	1
L811	VLQEL05F470K	COIL	47UH	1
L812	VLQEL05F681K	COIL	680UH	1
L851	VLQEL05F101K	COIL	100UH	1 NV-J1MC, NV-J101EM
L2002	VLPO074	COIL	1	
L2003	VLQEL05F101K	COIL	100UH	1
L3001-03	VLQEL05F101K	COIL	100UH	3
L3005	VLQEL05F120K	COIL	12UH	1
L3006	VLQEL05F6R8K	COIL	6.8UH	1
L3007	VLQEL05F101K	COIL	100UH	1
L3008	VLQEL05F3R3K	COIL	3.3UH	1
L3101	VLQEL05F101K	COIL	100UH	1
L3802	VLQEL05F101K	COIL	100UH	1
L3803,04	VLQEL05F150K	COIL	15UH	2
L3805	VLQEL05F101K	COIL	100UH	1
L7401	VLQEL05F10K	COIL	1UH	1
L7402	VLQEL05F101K	COIL	100UH	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L7404	VLQEL05F10K	COIL	1UH	1
L7601	VLQEL05F101K	COIL	100UH	1
		CONNECTORS		
P201	VJP1932T	CONNECTOR (MALE)	1	
P1001	VJP1393T	CONNECTOR (MALE)	13P	1
P2201	VJP1237T	CONNECTOR (MALE)	10P	1
P3001	VJP1237T	CONNECTOR (MALE)	10P	1
P4001	VJP1237T	CONNECTOR (MALE)	6P	1
P5001	VJS2571A012	CONNECTOR (FEMALE)		1
P5002	VJS2571A004	CONNECTOR (FEMALE)		1
P7401	VJS1662	CONNECTOR (FEMALE)		1
P7402	VJS2571A009	CONNECTOR		1
P7403	VJS2571A004	CONNECTOR (FEMALE)		1
		PACK PINS		
PK401	VJRO275	PACK PIN		1
PK402	VJRO189	CONNECTOR (MALE)		1
PK3801	VJRO406	PACK PIN		1
PK3802	VJRO231	PACK PIN		1
		TRANSISTORS		
Q201	2SD636	TRANSISTOR		1
Q301	2SB641	TRANSISTOR		1
Q302,03	2SC2206	TRANSISTOR		2 (B,C)
Q401	2SD1423	TRANSISTOR		1 (R)
Q601	2SD893	TRANSISTOR		1
Q602,03	2SD973	TRANSISTOR		2 (S)
Q608	2SD1273	TRANSISTOR		1 (P)
Q610	2SD637	TRANSISTOR		1
Q703	2SD601	TRANSISTOR		1 (S,T)
Q710	2SC2377	TRANSISTOR		1 (C,D)
Q712	2SD638	TRANSISTOR		1
Q713	2SD1328	TRANSISTOR		1 (S)
Q714	2SD501	TRANSISTOR CHIP		1
Q771	2SD501	TRANSISTOR CHIP		1
Q804	2SB641	TRANSISTOR		1
Q2002	2SD1206S	TRANSISTOR		1
Q2003	2SB641	TRANSISTOR		1 NV-J1EN
Q2003	2SA1309	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3001	2SC2206	TRANSISTOR		1 NV-J1EN
Q3001	2SC3314	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3003	2SD636	TRANSISTOR		1 NV-J1EN
Q3003	2SC3311	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3004	2SB641	TRANSISTOR		1 NV-J1EN
Q3004	2SA1309	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3006	2SC2206	TRANSISTOR		1 NV-J1EN
Q3006	2SC3314	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3007	2SB641	TRANSISTOR		1 NV-J1EN
Q3007	2SA1309	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3008	2SD636	TRANSISTOR		1 NV-J1EN
Q3008	2SC3311	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q3101	2SD636	TRANSISTOR		1
Q3601,02	2SC3311	TRANSISTOR		2
Q6004	2SD638	TRANSISTOR		1 NV-J1EN
Q6004	2SD1423	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q6005	2SB641	TRANSISTOR		1 NV-J1EN
Q6006	2SB643	TRANSISTOR		1 NV-J1EN
Q6006	2SB1030	TRANSISTOR		1 NV-J1MC, NV-J101EM
Q6007	2SB790	TRANSISTOR		1 (R,S) NV-J1EN
Q6007	2SA1512	TRANSISTOR		1 (R,S) NV-J1MC, J101EM
Q6011	2SB641	TRANSISTOR		1 NV-J1EN
Q6011	2SA1309	TRANSISTOR		1 NV-J1MC, NV-J101EM
		COMBINATION PARTS		
QR304	UN1212	TRANSISTOR-RESISTOR		1
QR401	UN4213	TRANSISTOR-RESISTOR		1
QR602	UN1119	TRANSISTOR-RESISTOR		1
QR607	UN1212	TRANSISTOR-RESISTOR		1
QR611,12	UN1212	TRANSISTOR-RESISTOR		2
QR701,02	UN2213	TRANSISTOR-RESISTOR		2

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R774	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	NV-J1MC	R3063	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R775	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	NV-J1MC	R3071	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R781	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1		R3085	ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R782	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R3086	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R791	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1		R3087,88	ERDS2TJ104	C.RESISTOR 1/4W 100K	2	
R792	ERJ6GEYJ120	M.RESISTOR CH 1/10W 12	1		R3095,96	ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R795	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	NV-J1MC	R3097	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R796,97	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	NV-J1MC	R3101	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R815	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R3102	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R816	ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1		R3103	ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R818	ERDS2TJ102	C.RESISTOR 1/4W 1K	1		R3104	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R819	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1		R3105	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R820	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1		R3806	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R821	ERDS2TJ273	C.RESISTOR 1/4W 27K	1		R3807	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R822	ERDS2TJ183	C.RESISTOR 1/4W 18K	1		R3808	ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R823	ERDS2TJ271	C.RESISTOR 1/4W 270	1		R3809	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R824	ERDS2TJ102	C.RESISTOR 1/4W 1K	1		R3810	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R825	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1		R3811	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R829	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1		R3812	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R831	ERDS2TJ821	C.RESISTOR 1/4W 820	1		R3813	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R851	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	NV-J1MC, NV-J101EM	R3814	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R852	ERDS2TJ990	C.RESISTOR 1/4W 39	1	NV-J1MC, NV-J101EM	R3815	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R853	ERDS2TJ154	C.RESISTOR 1/4W 150K	1	NV-J1MC, NV-J101EM	R3816	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R854	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	NV-J1MC, NV-J101EM	R3817	ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R855	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	NV-J1MC, NV-J101EM	R3818	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R856	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	NV-J1MC, NV-J101EM	R3819	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R858	ERDS2TJ561	C.RESISTOR 1/4W 560	1	NV-J1MC, NV-J101EM	R3820	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R2001	ERDS2TJ102	C.RESISTOR 1/4W 1K	1		R3821	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2004,05	ERDS2TJ223	C.RESISTOR 1/4W 22K	2		R3822,23	ERDS2TJ16A1	C.RESISTOR 1/4W 680	2	
R2007	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1		R4001	ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R2013	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R4002	ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R2014	ERDS2TJ824	C.RESISTOR 1/4W 820K	1		R4003	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2015,16	ERDS2TJ223	C.RESISTOR 1/4W 22K	2		R4004	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2017	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1		R6001-03	ERDS2TJ101	C.RESISTOR 1/4W 100	3	
R2018	ERDS2TJ221	C.RESISTOR 1/4W 220	1		R6004,05	ERDS2TJ333	C.RESISTOR 1/4W 33K	2	
R2019	ERDS2TJ124	C.RESISTOR 1/4W 120K	1		R6006	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R2020	ERDS2TJ821	C.RESISTOR 1/4W 820	1		R6007	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2021	ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1		R6008	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2022	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1		R6009	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R2023	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1		R6010	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2024	ERDS2TJ823	C.RESISTOR 1/4W 82K	1		R6011	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R2025	ERDS2TJ5601	M.RESISTOR 1/4W 5.6K	1		R6012	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R2026	ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1		R6013	ERDS2TJ693	C.RESISTOR 1/4W 68K	1	
R2027	ERDS2TJ473	C.RESISTOR 1/4W 47K	1		R6014	ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R2028	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1		R6015	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R2029	ERDS2TJ473	C.RESISTOR 1/4W 47K	1		R6024	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2030	ERDS2TJ123	C.RESISTOR 1/4W 12K	1		R6025	ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2031	ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1		R6026	ERDS2TJ6220	C.RESISTOR 2W 22	1	
R2032	ERDS2TJ471	C.RESISTOR 1/4W 470	1		R6027	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	NV-J1EN
R2034	ERDS2TJ104	C.RESISTOR 1/4W 100K	1		R6028	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2035,36	ERDS2TJ223	C.RESISTOR 1/4W 22K	2		R6029	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R2037	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R6037	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2038	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	NV-J1EN	R6038	ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	NV-J1EN
R2040	ERDS2TJ471	C.RESISTOR 1/4W 470	1		R6039	ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R2051	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R6040	ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R2201	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1		R6041	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R2202-04	ERDS2TJ150	C.RESISTOR 1/4W 15	3		R6042,43	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R2205	ERX12SJR68E	M.RESISTOR 1/2W 0.68	1		R6044,45	ERDS2TJ221	C.RESISTOR 1/4W 220	2	
R2402	ERDS2TJ561	C.RESISTOR 1/4W 560	1		R6054	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R2403	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R6055	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R3001	ERDS2TJ103	C.RESISTOR 1/4W 10K	1		R6060	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3002	ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1		R6061	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3003	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1		R7401	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3019	ERDS2TJ471	C.RESISTOR 1/4W 470	1		R7402	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R3022,23	ERDS2TJ821	C.RESISTOR 1/4W 820	2		R7601,02	ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R3028	ERDS2TJ102	C.RESISTOR 1/4W 1K	1		R7603	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3029	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1		R7604	ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R3030	ERDS2TJ750	C.RESISTOR 1/4W 75	1		R7605	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3034	ERDS2TJ333	C.RESISTOR 1/4W 33K	1		R7606	ERX1SJ152	M.RESISTOR 1W 1.5K	1	
R3036	ERDS2TJ273	C.RESISTOR 1/4W 27K	1		R7607	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3037	ERDS2TJ750	C.RESISTOR 1/4W 75	1		R7610	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3040	ERDS2TJ750	C.RESISTOR 1/4W 75	1		R7611	ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R3042	ERDS2TJ102	C.RESISTOR 1/4W 1K	1		R7612	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3051,52	ERDS2TJ750	C.RESISTOR 1/4W 75	2		R7613	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3062	ERDS2TJ223	C.RESISTOR 1/4W 22K	1		R7615	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	NV-J1MC

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		TRANSFORMERS		
T401	EIQ7QF014Q	TRANSFORMER	1	
T703	EIV5ECO21A	TRANSFORMER	1 NV-J1MC	
T703	EIV5ECO13A	TRANSFORMER	1 NV-J1EN, NV-J101EM	
T704	EIV5ECO20A	TRANSFORMER	1 NV-J1MC	
T704	EIV5ECO06A1	TRANSFORMER	1 NV-J1EN, NV-J101EM	
T711	EIS5ECO03A	TRANSFORMER	1 NV-J1MC	
T711	EIS5ECO04A	TRANSFORMER	1 NV-J1EN, NV-J101EM	
T851	ELM7Q207A	COIL	1 NV-J1MC, NV-J101EM	
		V.RESISTORS		
VR302	EVN4YCA00B23	V.RESISTOR	2K 1	
VR701,02	EVNDRAA00B23	V.RESISTOR	2K 2	
VR741	EVNDRAA00B14	V.RESISTOR	10K 1	
VR751	EVNDRAA00B53	V.RESISTOR	5K 1	
VR803	EVNDRAA00B14	V.RESISTOR	10K 1	
VR2001	EVNDRAA00B54	V.RESISTOR	50K 1	
VR2009,10	EVND1AA00B25	V.RESISTOR	200K 2	
VR3012	EVNDRAA00B52	V.RESISTOR	500 1	
VR3801	EVN4YCA00B14	V.RESISTOR	10K 1	
VR4001	EVNDRAA00B14	V.RESISTOR	10K 1	
VR4002	EVNDRAA00B25	V.RESISTOR	200K 1	
		CRYSTAL OSCILLATORS		
X301	VSK0275	CRYSTAL OSCILLATOR	1	
X710	EFCH38MSP31	SAW FILTER	1 NV-J1MC	
X710	EFCH38MSP1	SAW FILTER	1 NV-J1EN, NV-J101EM	
X711	EFCS65R5M3B	FILTER	1 NV-J1MC	
X711	EFCS5R5M5	FILTER	1 NV-J1EN, NV-J101EM	
X712	EFCS6R0M55	FILTER	1 NV-J1MC	
X712	EFCS5R5M55	FILTER	1 NV-J1EN, NV-J101EM	
X722	EFCS6R5M55	FILTER	1 NV-J1MC	
X801	VSK0152	CRYSTAL OSCILLATOR	1	
X3101	VSK0099	CRYSTAL OSCILLATOR	1	
X6001	VSK0244	CRYSTAL OSCILLATOR	1	
X7401	VSK0565	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	ENC87917	RF CONVERTER	1 (<1> OR VEQ1050	
			NV-J1EN	
	ENC87949	RF CONVERTER	1 NV-J1MC	
	ENC87948	RF CONVERTER	1 NV-J101EM	
	VEJ0890	ANTENNA TERMINAL	1 NV-J1EN	
	VEJ0905	ANTENNA TERMINAL	1 NV-J1MC, NV-J101EM	
	VMA7619	MAIN EARTH ANGLE	1	
	VMCO075	HEAT SINK FIX SPRING	1	
	VSC2734	HEAT SINK	1	
	VMP2631	FUSE HOLDER ANGLE	1	
	VSC1068	HEAT SINK	1	
	VMZ1352	HEAT SINK COVER	1 (FOR SUB MAIN)	
	VJRO275	PACK PIN (9PIN)	1 (FOR TV DEMODU.)	
	VJRO406	PACK PIN (5PIN)	2 (FOR TV DEMODU.)	
	VSC2232	SHEILD CASE(TOP)	1 (FOR TV DEMODU.)	
	VSC2233	SHEILD CASE(MAIN)	1 (FOR TV DEMODU.)	
	VSC2396	SHEILD CASE(BOTTOM)	1 (FOR TV DEMODU.)	
	VSK0612	TUNER	1 (<1> OR ENV77817F2	
			(FOR TV DEMODU.)	
			NV-J1EN, J101EM	
	ENV79806F2	TUNER	1 (FOR TV DEMODU.)	
			NV-J1MC	
	VEP05137B	HEAD AMP C.B.A.	(NLA)	
		CAPACITORS		
C501	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C502	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C505	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C507	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C508	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C510,11	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C512	ECUM1H620JCN	C.CAPACITOR CH 50V 82P	1	
C513	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C514	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C515	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C516	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C517	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C518	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C523	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C524	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C525	VQVD1C104NR1	S.CAPACITOR 10V 0.1U	1	
C528	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C530	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C531	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C532	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C533	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C534	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C538	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C539	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C540	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C541	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
		IC		
IC501	BA7274S	IC	1	
		COILS		
L501	VLQEL05F101K	COIL 100UH	1	
L503	VLQEL05F270K	COIL 270UH	1	
L504	VLQEL05F101K	COIL 100UH	1	
L505	VLQEL05F820K	COIL 820UH	1	
L506	VLQEL05F151K	COIL 150UH	1	
		CONNECTORS		
P002	VJS1449	CONNECTOR (FEMALE)	1	
P501	VJP1237T	CONNECTOR (MALE)	10P 1	
		TRANSISTORS		
Q501	2SB709	TRANSISTOR CHIP	1 (Q.R.S)	
Q502	2SC2295	TRANSISTOR	1	
		RESISTORS		
R501	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R503	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R504	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R507	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R508	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R510	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R512	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R513	ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R518	ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R519	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R523	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R524	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R525	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R526	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R527	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R528	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R532	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R533	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R534-36	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	3	
		V.RESISTORS		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR501	EVND1AA00B23	V.RESISTOR 2K	1				TRANSISTOR		
VR502	EVND1AA00B13	V.RESISTOR 1K	1		Q7501	2SD636	TRANSISTOR	1	
							COMBINATION PARTS		
		MISCELLANEOUS			QR7501	UN1213	TRANSISTOR-RESISTOR	1	
	■ VSC2353	SHIELD CASE(TOP)			QR7502	UN1112	TRANSISTOR-RESISTOR	1	
	■ VSC2355	SHIELD CASE(BOTTOM)			QR7503	UN1211	TRANSISTOR-RESISTOR	1	
	■ VSC2354	SHIELD CASE(MAIN)			QR7525	UN1216	TRANSISTOR-RESISTOR	1	
							RESISTORS		
	■ VEPO7574B	TIMER C.B.A.		(N1A)NV-J1EN	R6701	ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
	■ VEPO7574C	TIMER C.B.A.		NV-J1MC	R6702	ERDS2TJ0R2	C.RESISTOR 1/4W 8.2	1	
	■ VEPO7574E	TIMER C.B.A.		NV-J101EM	R7501	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
					R7502	ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
					R7503	ERDS2TJ221	C.RESISTOR 1/4W 220	1	
					R7504	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
					R7505	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
					R7506-10	ERDS2TJ103	C.RESISTOR 1/4W 10K	3	
					R7511	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
					R7512	ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
					R7513	ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
					R7514	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
					R7515-22	ERDS2TJ683	C.RESISTOR 1/4W 68K	8	
					R7523-27	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	5	
					R7531, 32	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	2	
					R7533	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
					R7534	ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
					R7535	ERDS1TJ3R9	C.RESISTOR 1/2W 3.9	1	
					R7538	FRDS2TJ103	C.RESISTOR 1/4W 10K	1	
					R7541	ERC14CK106	S.RESISTOR 1/4W 10M	1	
					R7542	ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
					R7545	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
					R7546	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
					R7550, 51	ERDS2TJ181	C.RESISTOR 1/4W 180	2	
					R7552-54	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	3	
					R7555	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
					R7556	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
					R7557-59	ERDS2TJ221	C.RESISTOR 1/4W 220	3	
							SWITCHES		
					SW7501-05	EVQ11407K	SWITCH	5	
					SW7508	EVQ11407K	SWITCH	1	
					SW7510	EVQ11407K	SWITCH	1	
					SW7511	EVQ11407K	SWITCH	1	NV-J1EN
					SW7515-17	EVQ11407K	SWITCH	3	
					SW7550	VSS0236	SWITCH	1	
					SW7551	VSS0236	SWITCH	1	NV-J1MC
							V.RESISTORS		
					VR5701	EVMLGGA00B15	V.RESISTOR 100K	1	
					VR7501	EWAKFKXC3B24	V.RESISTOR 20K	1	
							CRYSTAL OSCILLATORS		
					X7501	VSK0140	CRYSTAL OSCILLATOR	1	
					X7502	VSK0094	CRYSTAL OSCILLATOR	1	
							MISCELLANEOUS		
						VJF0762	FIP HOLDER	1	
						VKC0372	HINGE	2	
						VMD0473	LED SPACER	1	
						VMD0504	LED HOLDER	1	
						VGU4553	SW KNOB	1	
						VSC2059	SHEILD CASE(MAIN)	1	
						VSC1928	SHEILD CASE(BOTTOM)	1	

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